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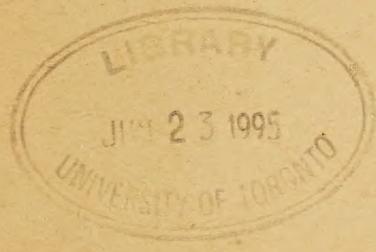
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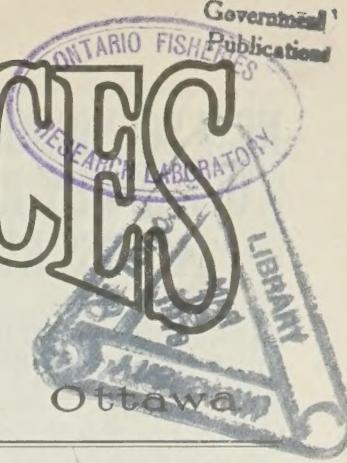


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NATURAL RESOURCES CANADA

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VOL. 5

JANUARY, 1926

No. 1

TOURISTS VISIT MARITIMES IN GROWING NUMBERS

IDEAL SPOT FOR HOLIDAY-SEEKERS

Game and Beautiful Scenery Abound in
Canada's Historic Atlantic
Provinces

The Maritime Provinces of Canada—Nova Scotia, New Brunswick, and Prince Edward Island—situated at the eastern limit of the Dominion, form one of the most interesting and attractive sections of Canada. It is a country of farming lands, of well wooded sections, of scenic rivers and lakes, of sea coast with dyked lands, salt marshes and long stretches of sand beach, interspersed with lofty cliffs commanding superb marine views.

The neighbouring sea gives to the Maritimes a distinct attraction which is unknown in inland sections. The peninsula of Nova Scotia projecting into the Atlantic is joined to the mainland by a narrow isthmus, the gulf of St. Lawrence washes the shore of Prince Edward Island, and with the bay of Fundy forms over half the boundary of New Brunswick.

Historically, the Maritime Provinces present many features of interest to the visitor. Each province has traditions and landmarks covering a period of more than 300 years, that will delight those who are interested in historical subjects. It was here that the early explorers first landed and that, later, many battles for supremacy took place.

In many districts there still remain visible ruins of early conflict. Such historic sites as Louisbourg, once proudly called the "Dunkirk of America," Fort Anne, dating back to 1604 and reminiscent of DeMonts and Champlain, and Fort Monckton, formerly Fort Gasperaux, are well known to students of history. Everywhere there is much that affords the visitor an opportunity to gather a wealth of historical data—scenes of early battles between the British and French, blockhouses and fortifications used for defense against the Indians, powder magazines, old churches and burial grounds, and other relics of the early days of settlement. Recently action has been taken by the Department of the Interior to preserve ruins of old forts from further decay and to mark sites of historic interest and importance.

The equable climate of the Maritime Provinces with its beneficial degree of humidity is noted for its healthfulness, and is one of the greatest charms of the region. Pleasantly warm days and cool evenings are characteristic of the sum-

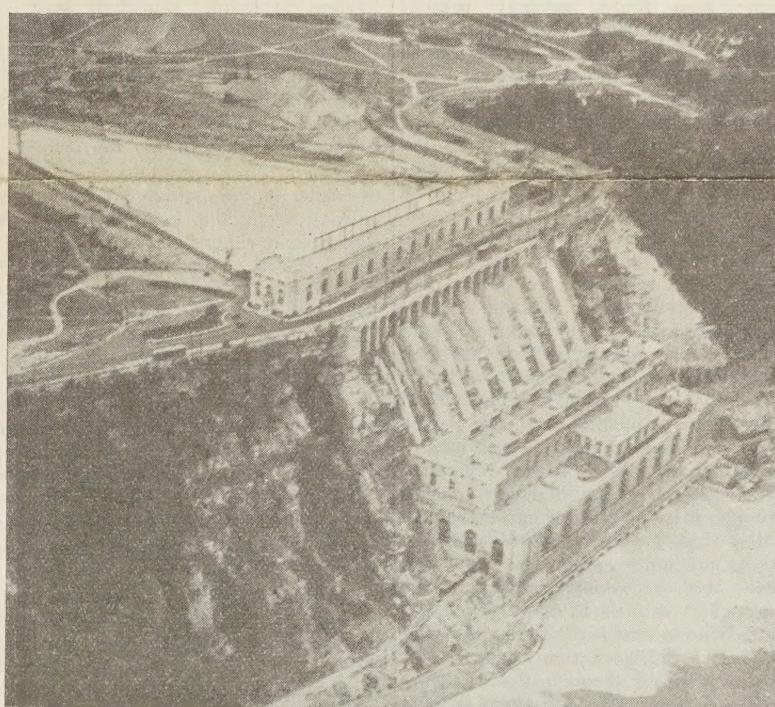
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GREAT PROGRESS IN WATER POWER

1925 A Record Year in Development of Hydro-electricity
—Minister of the Interior's Statement

The annual statement of the Minister of the Interior regarding the development, distribution and use of hydro-electric energy in Canada reveals great progress during 1925. Installations totalling over 719,000 horse-power were added to the generating capacity of Canadian hydro-electric stations, which now aggregates 4,290,000 horse-power.

the work of hydro-electric installation proceeds at an accelerated pace and less time than formerly elapses between the turning of the first sod and the commercial operation of the first turbine. In addition to the greater rapidity of construction the policy of the department, seconded by the co-operating provincial authorities, has served to stimu-



Water-Power Development in 1925—Aerial photograph of the great hydro-electric power station of the Ontario Hydro-electric Power Commission on the Niagara river at Queenston, Ontario. In the top of the picture may be seen the fore-bay and part of the canal which brings the waters of the Niagara river from Chippawa, above the falls, 12½ miles along the high ridge to Queenston where the turbines get the benefit of the drop of 305 feet to the Niagara river seen in the foreground. Two units of 55,000 horse-power each were added during the past year, completing the plant and bringing the total installation up to approximately 500,000 horse-power.

This new development, it is estimated, represents a direct investment of at least \$70,000,000, without regard to new capital required in the application of the power. Projects approaching completion will add more than 250,000 horse-power early in 1926, whilst others already commenced or in immediate prospect promise a very substantial increase in installation during the next few years.

The aggregate installation in any one year marks the fruition of intensive effort for a considerable period, therefore, the record installation of 1925—almost double of any previous year—should be credited partly to the efforts of previous years. With the ever increasing demand

late healthy progress, in that, the systematic and uniform accumulation of basic water resource data throughout the Dominion has served to eliminate much of the uncertainty as to water supply which formerly handicapped development.

Inexpensive power, water-generated, is one of Canada's most important assets and is the foundation of much of the industrial activity and the municipal undertakings of the whole Dominion. The pulp and paper industry relies almost entirely upon water-power and, with the exception of coal, the vast production of Canadian mines is made possible by the same source of energy.

(Continued on page 3)

AERIAL SURVEYS AID DEVELOPMENT OF OUR RESOURCES

EXPERIMENTAL STAGE
PASSING IN CANADA

About 47,700 Square Miles of Territory
Successfully Photographed Last Season

The season which has just closed has added another milestone to mark the rapid progress made in Canada in applying aerial photography in a practical and economical manner as an aid to the development of the natural resources of the country. So marked has this progress been that, while experimental work is still necessary to further advance this new science, aerial photography has now reached a stage where it is playing a very definite part in increasing the efficiency of all investigations of these resources, at the same time enabling much larger areas to be covered. During the past season alone approximately 47,700 square miles have been successfully photographed. This large amount of work was accomplished by the close co-operation of the Royal Canadian Air Force and the Topographical Survey, Department of the Interior.

In patrolling the forests to discover and check the numerous fires which annually do so much damage the aeroplane has supplemented, in some districts, the previous inadequate methods of ground patrol. Maps must be provided for the guidance of the aeroplanes on these patrols and for the development of the resources in those unmapped areas of which so little is known and which cover a very large part of Canada. Many of these areas are heavily forested, many present geological formations favourable to the location of valuable ore deposits, and others contain undeveloped water-powers of great potential value, and lakes and rivers well supplied with fish.

Mapping and investigating these regions by ground methods alone is more expensive and much less accurate than by air, a great drawback toward their proper development. This is where the plane has been pressed into service in this country with such success.

The operations during the season were carried on in various parts of Canada from air bases already established. The bulk of the work performed was, however, located in Manitoba and western Ontario where 37,700 square miles of forested and mineralized areas were photographed. These operations were carried out in co-operation with the Dominion Forest Service from the Victoria Beach Air Station which was established four years ago principally for fire patrol purposes.

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NEW SCENIC AREA OPENED BY ROAD ACROSS ROCKIES

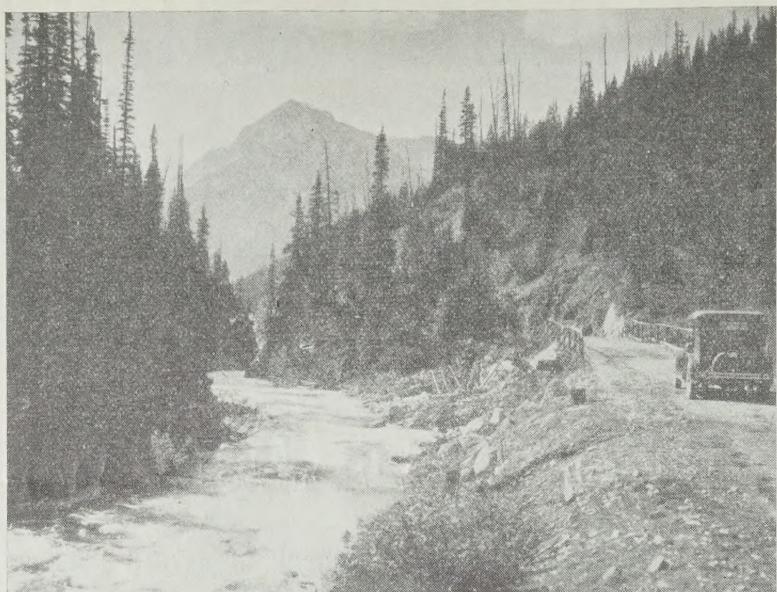
LAKE LOUISE-FIELD HIGHWAY NEARS COMPLETION

Glories of Yoho National Park in British Columbia Now Accessible to Motorists

Steadily year by year, the motor car is making its way into the most remote regions of the continent. It has forced many doors open into hitherto inaccessible territory and brought about the projection of undertakings of nationwide benefit.

The latest achievement in this connection is the completion of a motor highway across the famous Kickinghorse pass in the Central Rockies, opening up the previously inaccessible glories of the Yoho valley and Emerald lake, in Yoho National park, to the motoring world. The engineering staff of the Canadian National Parks has practically completed work on the new road and it is expected that it will be open for traffic by the end of June next year. The new road continues westerly from near Lake Louise gradually ascending to the Great Divide and thence descending through the Kickinghorse pass to the Yoho valley, utilizing in part, in British Columbia, a short section of the abandoned Canadian Pacific Railway right of way. Between the summit of the Divide and Field, a distance of 11 miles, there is a drop of over 1,200 feet. The descent was formerly made by the railway in a series of thrilling hairpin curves which gave the traveller glimpses of some of the most dramatic scenery in the world. Climbing the grade it was often necessary to use four engines to pull the train up to the Divide. The construction of the spiral tunnel is one of the greatest engineering feats of this century. It adds to the comfort of passengers and the ease of operation of the railway but deprives the traveller of some most remarkable views. On this account in recent years, many mountain lovers have been in the habit of alighting from the train at Hector and walking down by the old grade to Field. The motorist of to-day will, however, soon be able to glide down from the summit by safe and easy grades and enjoy at his leisure the magnificent panorama unfolded along the way.

This will include high views looking up the Yoho valley with the magnificent ice-fields visible at its head, the splendid Waputik escarpment walling its eastern side and to the west the rugged outlines of mount Burgess with the glacier-crowned head of mount President showing beyond. Three miles before reaching Field the road will connect with the existing motor road which reaches 8 miles up the Yoho valley as far as Takakkaw falls, a splendid cascade over 1,150 feet in height, which is fed by the Daly glacier between mounts Nile and Balfour. Another road 7 miles long leads from Field to Emerald lake, one of the most beautiful lakes in the Rockies which is known to beauty lovers the world over. At Emerald lake a beautiful Canadian Pacific Railway chalet provides accommodation and there are small but adequate bungalow camps at Wapta lake and Takakkaw falls, both under the management of the Canadian Pacific railway.



New Scenic Area Opened by Road Across Rockies—A section of the newly-constructed Lake Louise-Field motor highway in Yoho National Park. The Kickinghorse river is seen to the left, while mount Field towers in the background.

This year the Government also began operations on the construction of an additional road from Field to the western boundary of Yoho park. There it will link up with a highway now under construction by the Government of British Columbia from Golden east. Once these two roads are completed there will be opened to the motorist a scenic loop route probably without parallel in the world which will include a great part of the finest scenery of the Rockies. From Calgary the road will proceed west to Banff, from that point to Castle, from Castle to Lake Louise, thence down to Field and along the magnificent canyon of the Kickinghorse, one of the most spectacular regions of the Rockies, to Golden, thence south, via the Columbia or Windermere valley to the western gate of the Banff-Windermere highway returning over that road to Banff. The Banff-Windermere highway is already connected on the east, via Calgary, and on the west by the Columbia River road with the 4,600 mile loop, known as The Grand Circle Tour, stretching down the Pacific coast to southern California and returning via Arizona, Utah, Idaho, Wyoming, and Montana. The highway touches throughout its length ten national parks in the United States and Canada, and the Canadian section is by no means the least attractive part of the tour. The growth in travel over the Banff-Windermere highway, in the past two years indicates the tourist possibilities involved through the construction of the new road and there is little reason to doubt that within a few years it will be the means of attracting thousands of visitors annually to the Canadian National Parks.

TOURISTS VISIT MARITIMES IN GROWING NUMBERS

(Continued from page 1)

mer while autumn brings clear, crisp weather, with little frost. The ports St. John and Halifax are open for commerce throughout the year.

The Maritime Provinces are readily accessible by steamship from Europe and by steamer, railway and motor car from the United States and the other provinces of Canada. During the last few years a determined effort has been made by the governments concerned to improve the roads, and as a result motorists may visit every county within the three provinces with the assurance of finding excellent motor roads. From

Boston, New York, and eastern sections of the United States the most convenient place to enter the Maritimes by motor is either at Calais, Maine, and St. Stephen, New Brunswick, or at the boundary line between Houlton, Me., and Woodstock, N.B. From Montreal there is a well constructed highway through the province of Quebec to Riviere du Loup. Branching here one section of the highway enters New Brunswick at Edmundston and another runs through the well known Matapedia valley to Campbellton, N.B. From these points a network of roads stretches out covering all parts of the Maritimes.

Lines of railway tap every county and the most remote sections are but a brief journey from the large cities of the eastern and central parts of the continent. Sportsmen or tourists coming to the Maritimes from Ontario, Quebec, and points west can travel either by the Canadian Pacific Railway, or by the Canadian National Railways. There is also excellent train service connecting the Maritimes with the New England and Middle West States. From Boston to St. John, N.B., by rail, a distance of 450 miles, there is a through express making the run in 14 hours. The service on all these lines is of the best, and the officials are courteous and ever ready to supply information to travellers.

In addition to the facilities of transportation by railway and motor road, the Maritimes are reached by excellent steamer service. Fast steamers run from Boston to Yarmouth; from Boston and New York to Halifax; and from Boston and Portland to St. John. Numerous ocean liners ply between St. John and Halifax and various foreign ports.

As a recreational centre this part of Canada has few equals, and the large number of visitors who annually spend their holiday season within its borders speaks highly of the many attractive features and of the hospitality of its people. To those who look for fish and game the Maritimes offer unusual sport and abundant choice. Thanks to wise legislation for the protection of wild life, the country is now well stocked with moose and deer, game birds, and game fish.

New Brunswick, commonly referred to as "The Sportsmen's Paradise," is without doubt one of the finest sporting areas on the continent. The law requires that non-resident sportsmen must be accompanied by qualified licensed guides. Accommodation in the woods is provided by the guides, each of whom has

NEW RECORD IN LEAD OUTPUT

Canadian Mines Produced 175,485,499 Pounds in 1924

A new Canadian record in lead output was established in 1924 when the recovery totalled 175,485,499 pounds, an advance of 57.7 per cent above the previous high record of 111,234,486 pounds set up in 1923, according to a statement issued by the Dominion Bureau of Statistics. Production was valued at \$14,221,345, an advance of 78.2 per cent above the total of \$7,985,522 in 1923.

his own territory, hunting lodges and equipment. Nova Scotia shares with New Brunswick the distinction of being uniformly favoured by sportsmen in search of big game, generally moose and deer. It is a hunting ground involving no hardships of pack-trains, long marches, or tiresome wagon trips. In many sections the hunter may even motor to the forest's edge. Prince Edward Island, "The Garden of the Gulf," is not a big game country, not only because of its comparatively small size, but because it is more intensively cultivated than either Nova Scotia or New Brunswick. At the same time there is first-rate sport in wildfowl, such as geese, brant, ducks, woodcock, plover, and snipe, which are to be found in great numbers during the late summer and autumn.

Although the Maritime Provinces have long been settled, they still offer to the angler wonderful opportunities for sport. Salmon fishing is enjoyed, both in New Brunswick and Nova Scotia, while for trout fishing the three provinces offer a choice of many excellent localities. Although there is no extensive salmon fly-fishing in "The Island Province," there are trout waters that rival those of the other provinces. Each year lovers of deep-sea fishing are becoming more numerous and there are few countries to-day that offer such a variety of deep-sea fishing as the Maritime Provinces. Tuna and swordfish are found in the coastal waters and the capture of these large fish furnishes sport long to be remembered.

These provinces have also much to offer the visitor who is interested in golf, tennis, and other forms of outdoor recreation. Splendidly equipped golf courses may now be found in many of the towns and villages, while tennis may be considered one of the national games.

There is found throughout the Maritimes a variety of scenery which will delight the eye of the visitor. Each town and suburban area has its own peculiar charm, and such famous places as St. Margarets and Mahone Bay on the south coast of Nova Scotia, the Bras d'Or Lake region of Cape Breton island and the Wentworth and Annapolis valleys need no special mention. The pastoral beauty of Prince Edward Island and the scenic loveliness of the St. John River valley and Chalet bay in New Brunswick all add to the pleasure of the holiday. In fact all through the Maritimes are numerous beauty spots where the visitor is assured of excellent hotel accommodation at reasonable rates and where fresh delicacies may be obtained at farmhouses.

The people of the Maritime Provinces each year look forward to the annual visit of tourists and friends from the neighbouring states, as well as from central Canada, and the fame of the "provinces down by the sea" is steadily growing.

NATURAL RESOURCES CANADA

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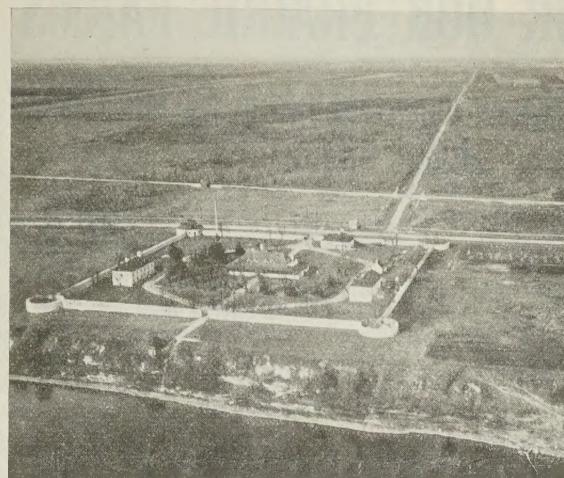
OTTAWA, JANUARY, 1926

The late R. H. Campbell

By the death on the 26th November last, of Mr. Robert Henry Campbell, who until his retirement a little over two years ago was Director of Forestry in the Department of the Interior, there passed away one who had done outstanding work for the advancement of forest conservation in Canada. Mr. Campbell entered the service of the Government in 1887 at the age of 20 years. He was, therefore, in so far as his development and experience are concerned, a product of the civil service. Early in his career he became seized of the national importance of forest conservation, and this subject became with him a passion. He assisted in the organization of the Canadian Forestry Association in 1900, and served that organization in several capacities as a labour of love. He was secretary of the great Forestry Convention called to meet in Ottawa by Sir Wilfrid Laurier in 1906, and a large measure of the success of that epochal convention was due to his capacity for organization and detail.

These activities, together with his departmental experience and training, were fitting him for the responsibilities that were to come upon him later, and when in 1907 his predecessor, Mr. Elihu Stewart, resigned, Mr. Campbell became Director of Forestry. When Mr. Campbell assumed his duties he took over the control and management of an area of 5,392 square miles which by the Forest Reserves Act had been set apart as forest reserves, and had under his direction a staff of less than 100 persons, only three of whom were graduate foresters. In 1911 the Forest Reserves and Parks Act increased the area of forest reserves to over 25,000 square miles, and to give effect to the broader policies which the new Act embodied, Mr. Campbell developed to a high state of efficiency an organization which on his retirement included over 600 persons, of whom 82 were technical officers. It is for the foresight which, a quarter of a century ago, envisioned Canada's danger and opportunity, as well as for the comprehensiveness and thoroughness of this pioneer work in forestry that he will be remembered by forest conservationists.

Mr. Campbell continued in vigorous discharge of his duties until 1918, when during the course of his annual field trip of inspection he was thrown from a railway gasoline speeder which had collided



Lower Fort Garry, on the Red river twenty miles below Winnipeg, Manitoba, photographed from the air by planes engaged in mapping operations for the Topographical Survey, Department of the Interior.



Aerial view of the harbour of St. John, New Brunswick, looking southeast toward the bay of Fundy. The clearness with which the different features stand out indicates the advantages of aerial photography.

AERIAL SURVEYS AID DEVELOPMENT OF OUR RESOURCES

(Continued from page 1)

The first operation from this base included the mapping of some 4,000 square miles in the vicinity of the summer resort of Minaki, the mineral district of Red Lake, and Lac Seul. Less than 40 hours flying were required for this work, with a surveyor acting as navigator. The resulting map, which will be issued in the course of a few months, will show hundreds of additional lakes, every bay and curve in the shore line, every island, all the timbered and burnt areas, swamps, rock exposures, and other related features. Such maps are of vital importance to the prospector, the tourist, the forester, the geologist, and the water-power engineer. Similar maps are being produced of the areas lying east of lake Winnipeg and it is expected they will be issued before the opening of next season.

In New Brunswick, an area of 225 square miles was photographed in the Fredericton district for the Provincial Forestry Service. In Quebec, about 400 square miles were photographed in the Sorel and Shawinigan districts, and photographs were taken of the town of St. Johns. In Ontario the Rideau canal, the Rideau lakes, and part of the Muskoka area were successfully photographed. In Manitoba, in addition to the areas previously mentioned, a section of The Pas mineral district was photographed as well as the Hudson Bay railway. Further views were taken in northern Saskatchewan and Alberta of forested areas.

Coincident with this work experiments were carried on in applying aerial photography to aid in the making of topographic maps where accuracy and detail are so essential. These experiments were successful and resulted in the introduction of more improved methods, and much greater speed. Other experiments involving the use of the stereoscope were successfully carried on with a view to assisting in investigations relating to the development of hydro-electric power projects.

All the work accomplished during the season was designed to assist in some definite way the development of the natural resources of the country and the progress made is very encouraging.

with a handcar. In this accident he received injuries from which he never sufficiently recovered to allow him to resume fully the responsibilities of his office, and in 1923 he resigned his position, leaving to other hands the carrying on of the important work he had begun.

GREAT PROGRESS IN WATER POWER

(Continued from page 1)

The outstanding activities during 1925 were in Quebec, Ontario, and British Columbia, though, in nearly every province actual construction took place or progress was made with promising projects.

Quebec had a record year with a total new installation of 439,000 horse-power, exceeding the installation for the whole Dominion in any previous year. This increase was largely accounted for by the bringing into operation of the 360,000 horse-power initial installation of the Duke-Price Power Company at Isle Maligne on the Saguenay river, to which an extension to 480,000 horse-power is proceeding and is expected to be completed in February, 1926. Amongst others completed during the year, were the 37,800 horse-power development of the Southern Canada Power Company at Hemming Falls on the St. Francis river and the Bryson station of the Ottawa River Power Company on the Ottawa river. Power developments, too numerous to set forth in detail, are approaching completion, under construction or about to be undertaken. Of these the largest is that of the Aluminum Corporation of America at Caron Chute on the Saguenay river, where an ultimate development of 800,000 horse-power is proposed. Another important development is that of the International Paper Company at Chelsea on the Gatineau river for the supply of a pulp and paper mill, whilst amongst other activities the Shawinigan Water and Power Company's new station on the Batiscan river is approaching completion. The work of the Quebec Streams Commission in the construction and operation of storage reservoirs in the interest of power development was marked by the completion of the Kenogami Lake reservoir to regulate the Sables and Chicoutimi rivers and of the Metis reservoir.

In Ontario the total 1925 installation was almost 200,000 horse-power, for which the Ontario Hydro-Electric Commission was largely, although not entirely, responsible. The Commission's Queenston-Chippawa plant was brought to its complete capacity by the addition of two 55,000 horse-power units, whilst the largest of its other activities was the completion of the 75,000 horse-power plant at Cameron Falls on the Nipigon river.

Amongst the other principal developments, were the 24,000 horse-power extension to the Island Falls plant on the Abitibi river carried out by the Abi-

tibi Power and Paper Company, and also the 17,000 horse-power development of the Keewatin Power Company at the western outlet of the Lake of the Woods.

In British Columbia some 59,000 horse-power was added to the installations. Of this 23,000 horse-power was secured by the British Columbia Electric Railway Company at its Stave Falls plant and, the remainder, at Lower Bonnington Falls on the Kootenay river where the West Kootenay Light and Power Company has entirely rebuilt its old plant. The Powell River Company will complete a 25,860 horse-power extension in 1926.

In the other provinces there was considerable activity. In Manitoba, the City of Winnipeg added 21,900 horse-power to its plant on the Winnipeg river and let contracts for two further units for 1926 delivery, which will bring the station to its full capacity of about 104,000 horse-power. Other developments on the Winnipeg river are also in prospect.

In the Maritime Provinces the only actual hydro-electric construction completed in 1925 was a small 245 horse-power installation at Annapolis, N.S., but a number of extensions and new plants are in active prospect.

While it can hardly be expected that the record installation of 1925 will be equalled in 1926, there is every reason to believe that substantial growth will continue to be registered each year for some time to come and that the record established in the year just completed will not be allowed to stand for more than a few years.

The journey over the entire length of the Banff-Windermere highway through the heart of the Canadian Rockies can be made comfortably in one day. The route lies through virgin wilderness, but rest camps, automobile camping grounds, bungalow camps and service stations are located along the way in such numbers as to guarantee accommodation for those who wish to make a more leisurely survey of the road.

The Ski Carnival which is annually staged by the Revelstoke Ski Club in Mount Revelstoke National park is becoming one of the most popular affairs of its kind in Canada. For three successive years the world's records have been broken at the competitions held on the Revelstoke hill.

CANADIAN MINES WERE ACTIVE DURING 1925*

Revival of Operations for Copper, Lead, and Zinc a Feature—Gold Output Increased

Long strides were made by the mineral industry of Canada during 1925. Not only were operations in going concerns pushed with energy, particularly in metal mining, but many activities were initiated that it is expected will eventually lead to a very marked increase in production.

There have been several new developments in copper mining. Most of the copper produced in Canada comes from the Anyox and Britannia mines of British Columbia and the nickel-copper mines of the Sudbury district, Ontario. The production exceeds 100,000,000 pounds a year. As a result of an improvement in the copper market, work has been resumed on Alleby mountain, British Columbia, and from this source a good output is expected. Interest has also turned to the Flinflon, Manitoba, deposit of 16,000,000 tons of auriferous copper-zinc sulphides, an option has been taken on the property, and investigations are being made into the metallurgical treatment of the ore. Eventually all difficulties will be overcome and this ore-body will prove the foundation of a big mining and metallurgical industry. In northwestern Quebec the Noranda Mines Limited has by development work added greatly to its known ore reserves and the establishment of railway connections for this camp, which are to be completed at an early date, will result in the building up of important mining and smelting industries in this part of the province. The discovery during the year of copper-zinc sulphides on the Waite-Montgomery property has aroused increased interest in the possibilities of this area.

Lead and zinc are terms to conjure with. Seldom has there been such a scurrying for minerals as has been made for lead and zinc minerals during 1925. Showings that a short time ago would have been passed with scant consideration are now receiving the closest attention of mining engineers, and some give promise of developing into mines. Considerable productions of lead and zinc are being made from mines in Ontario, Quebec, and Yukon but the greater proportion comes from the Sullivan mine of British Columbia. The growth in the lead and zinc mining industry has been phenomenal. The production of lead and zinc rose from 35,953,717 pounds and 39,863,912 pounds respectively in 1920 to 175,485,499 pounds and 98,909,077 pounds in 1924, and the production for the first half of 1925 indicated a great increase for this year.

The production of gold in Canada rose from \$14,463,689 in 1918 to \$31,532,402 in 1924 and \$17,034,480 during the first six months of 1925. This increase is due almost wholly to developments in the Porcupine and Kirkland Lake mining camps of northern Ontario where the total production for 1925 will amount to about \$30,000,000. Ontario produces about ninety per cent of the gold of Canada. Reserves of ore are blocked out well in advance of mining and it is expected this province will make heavy productions for a great many years.

*Prepared under the direction of Dr. Charles Camsell, Deputy Minister of Mines, by Mr. Wyatt Malcolm, of the Geological Survey, Ottawa.

TREES FOR OUR PRAIRIE FARMS

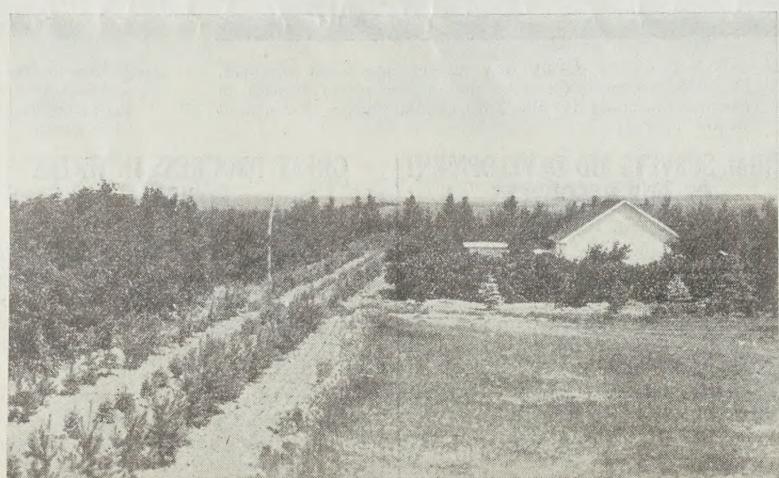
Shelter-belts Are Playing Important Part in Western Canada's Rural Life

One of the important divisions of the work of the Forestry Branch of the Department of the Interior is that engaged in carrying on the co-operative plan for furthering tree planting in the Prairie Provinces of Canada. Each year thousands of shelter-belts have been established from seedlings, cuttings, and transplants distributed from the nursery

and since this work was begun in 1901, over 82,000,000 trees have been sent out.

Tree planting is encouraged in five ways, as follows:—

(1) By supplying seedlings and cuttings of broadleaved forest trees to applicants at no cost other than that of express charges from the nursery to the applicant's station.



Trees for Our Prairie Farms—Shelter-belts surrounding a farmhouse in southwestern Saskatchewan. In the left foreground evergreens have been set out under the protection of the older broad-leaved shelter-belt.

stations at Indian Head and Sutherland, Saskatchewan, to farmers throughout Manitoba, Saskatchewan, and Alberta,

The gold possibilities of the geological formations of Rouyn and vicinity, Quebec, continue to attract the attention of prospectors and investors. The building of the railway to Rouyn will provide greater facilities for intensive exploration.

The annual production of nickel is now greatly in excess of that of any year previous to the war. The greatest production before the war was made in 1913 and amounted to 49,656,772 pounds; in 1924 it amounted to 69,536,350 pounds and during the first half of 1925 to 35,756,640 pounds. The marked growth in the industry is due in great measure to the initiative of the operating companies in carrying on research into the possibilities of making new applications of nickel and its alloys in the industries, in carrying on educational propaganda, and in aggressive salesmanship. Two events of the year are worthy of mention,—the purchase of the property of the British America Nickel Corporation, Ltd., and opening by the Mond Nickel Company of a sulphuric acid plant for the manufacture of acid from the waste sulphur dioxide.

Mention should be made of the increased operations in the Gowganda and South Lorrain silver camps; of the drilling activity in the Turner Valley oil-field incited by the discovery in the autumn of 1924 of a heavy flow of wet gas; of the discovery of oil in the Wainwright field at a lower geological horizon than it had previously been found; and of the efforts made towards bringing about a merger of the asbestos-producing companies of Quebec. They are matters of great importance. These and other new activities bode well for the future.

ROYAL BANK USES NEW MEDIUM FOR FOREST FIRE APPEAL

Utilizes Paid Space in Newspapers to Point Out Value of Timber Conservation

From a state of comparative indifference a few years ago the cause of forest conservation has steadily advanced in Canada until now the public is becoming seized of its great importance. This, outside of the efforts put forth by governments and forestry organizations, has been due to the leadership of the heads of our industrial, railway and financial institutions. The first to advocate forest protection were, naturally, the wood-using industries, which printed warnings on their cheques and letterheads and on the containers of their products. They were followed by the railways, which gave space to the subject in their time-tables and tourist folders.

The financial institutions have long encouraged fire prevention, and in many annual reports the subject has been ably dealt with; but it has remained for the Royal Bank of Canada to make use of its paid space in the newspapers to direct attention to the huge loss the country suffers from forest fires, and to point out that helping to save the forest means aiding in the conservation of Canada's wealth. This patriotic and foresighted act is of great importance, because people know that the banks are not given to fads, and, because of this, largely accept their leadership in all matters bearing on the relation of natural resources to the country's commerce.

Assistance is confined to residents in rural districts and no trees are supplied to persons living in towns or cities nor are fruit or ornamental trees supplied. The object has been to encourage the planting of shelter-belts to make the prairie homesteads more homelike and comfortable and by checking the high prairie winds and conserving moisture, to increase the production of the farm. Instead of the farmers looking askance at the scheme and declining to devote the necessary time to their plantations, they have proved the strongest advocates of the movement and, in spite of the handicaps of the war years, planting has gone on at an accelerated pace. The plan has in fact been so successful that experts were sent in to examine it with the result that it has been adopted in two provinces in Eastern Canada and by the United States Department of Agriculture in respect to prairie lands.

As it takes a year to grow the stock for shipping, the Tree Planting Division has to know a year in advance what will be the quantity of material required. Because of this farmers in the Prairie Provinces who desire to set out plantations in the spring of 1927 must make application before March 1, 1926, to the Chief of the Tree Planting Division at Indian Head, Saskatchewan, from whom all information may be secured.

The National Parks Branch, Department of the Interior, has placed a tablet on the front wall of the office of the *Daily Whig* at Kingston, Ontario. This building stands on the site of the old St. George's Anglican Church, within which on July 8, 1792, Governor Simcoe held his first meeting of the Executive Council of the province of Upper Canada. The inscription on the tablet indicates the historic importance of the site.

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WESTERN INDIANS REAP BIG GRAIN HARVEST IN 1925*

CROP OVER THE MILLION- BUSHEL MARK

Advancement and Growing Prosperity
Evidence of Efforts Put Forth by
Canadian Government

The Indians of the Prairie Provinces in 1925 reaped over a million bushels of grain—roughly 850 carloads—and had on their farms fifty thousand head of live stock. Canada, taking from the beginning the stand that the Indians were the wards of the nation, has done for them probably more than any other country, colonized in modern times, has done for its aborigines. The effort of the Government has always been not to pauperize the Indians but to lead them to a position of self-support under the new conditions. The Department of Indian Affairs in this has had an uphill task, and until twenty-five years ago the Indians of the plains did not seem to be taking seriously to farming and stock raising but within that time, and particularly within the last few years, the effect of the teaching and effort of the past forty years has made itself apparent.

Some of the details are interesting and informative. There are according to the last census 30,934 Indians in the Prairie Provinces, divided as follows: Manitoba, 11,673; Saskatchewan, 10,271; Alberta, 8,990. The reserves in which these Indians live contain some of the finest land in Western Canada, particularly those situated in Saskatchewan and Alberta. The Indians of Manitoba own some splendid land but most of them live in the northern part of the province where little farming can be done and where they earn a livelihood by hunting and fishing. In Alberta, Indian reserves cover 1,307,343 acres; in Saskatchewan, 1,195,674 acres, and in Manitoba, 415,477 acres.

Farming and stock raising are and will be the main occupation of the Indians of the Prairie Provinces and in these lines they have been very successful. In 1924 the number of Indian farmers was 1,718 and they grew 898,464 bushels of all grains. In 1925 the crop harvested from Indian farms reached 1,142,933 bushels made up of 552,586 bushels of wheat; 495,779 bushels of oats; 94,153 bushels of barley; and 515 bushels of other grains. The average

(Continued on page 4.)

*Prepared under the direction of Dr. Duncan C. Scott, Deputy Superintendent General of Indian Affairs, by Mr. W. M. Graham, Commissioner, Regina.

CANADA'S PULP AND PAPER INDUSTRY

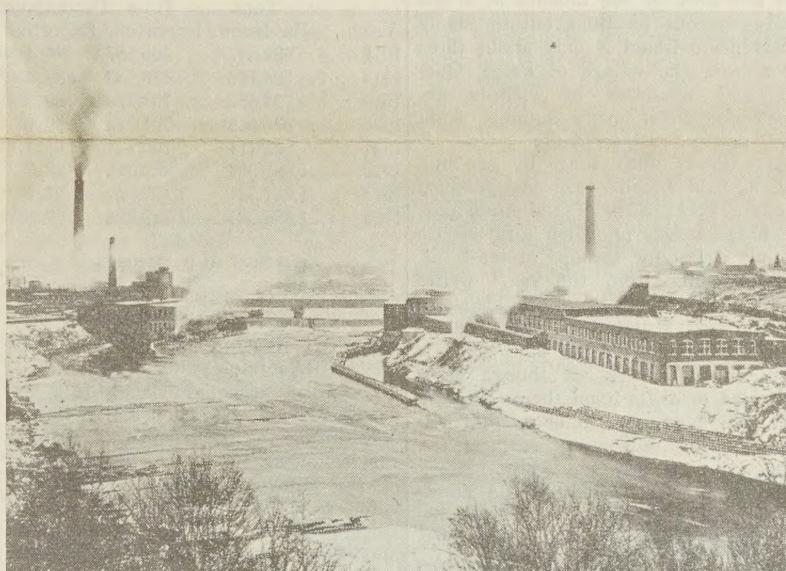
Remarkable Growth Recorded During Past Twenty Years— Now Holds First Place in Value of Production

One of the outstanding features of Canadian industrial development in the past twenty years has been the rapid growth of the pulp and paper industry from a position of relative insignificance to that of the leading manufacturing industry in Canada. It attained this position in 1923, the latest year for which comparative figures are available, when it displaced the flour-milling industry which had held first

over the 1923 figures in the year 1925. There were 115 plants manufacturing pulp and paper in 1924, with a capital investment of \$459,457,696. Nearly \$112,000,000 has been added to the capital investment in these plants since 1920.

RAPID GROWTH OF THE INDUSTRY

The above figures give an idea of the standing of the pulp and paper indus-



Canada's Pulp and Paper Industry—A pulp and paper plant in Eastern Canada, showing the different factory units and part of the water-power development.

place in 1921 and 1922. In 1923 the production of pulp and paper exceeded in value that of the flour-milling industry (\$154,895,991), by over \$29,000,000, in round numbers, and it surpassed the value of the output of each of the next two industries, saw-milling and meat packing, by almost \$45,000,000. The pulp and paper industry also stood first in the amount of salaries and wages paid, viz., \$38,382,845, which exceeded saw-milling by about five million dollars. Figures show that the pulp and paper industry adds more to the value of the raw materials than most other secondary industries, and in the year in question this increment in value amounted to over \$113,000,000 or 158 per cent.

Considering the total net value of the combined industry as the sum of the values of pulpwood exported, pulp exported and paper manufactured, the total in 1924 was \$187,174,703. This was a falling off of \$1,467,406 from 1923, but the indications are that there will be a very considerable increase

try in relation to the other industries of Canada; the following figures of annual average production over four-year periods show its rapid growth:—

Pulpwood Cut in Canada

Period.	Cords Exported.	Percentage
1909-1912	1,616,629	57.3
1913-1916	2,382,404	42.2
1917-1920	3,551,316	33.0
1921-1924	4,124,734	29.2

Pulp Manufactured in Canada

Period.	Tons Exported.	Percentage
1909-1912	524,869	57.9
1913-1916	1,040,053	39.6
1917-1920	1,674,423	39.2
1921-1924	2,160,062	34.8

Collection of figures of paper manufactured began in 1917 and from that time newsprint has formed about 80 per cent of the total of all paper produced. The following table gives newsprint production, and quantity and percentage of newsprint exported.

(Continued on page 2.)

WATERTON LAKES NATIONAL PARK MOST ATTRACTIVE

AN IDEAL SUMMER PLAYGROUND

Scenic Beauty Combined With Recreational
Opportunities Makes Area Popular
With Tourists

The fact that Waterton Lakes park is some forty miles from the nearest railway is no doubt the cause of its being, perhaps, the least known of the great national playgrounds of Canada. This park is situated in the southeast corner of Alberta adjoining British Columbia on the west and the state of Montana on the south. It is approximately forty miles from both Pincher Creek and Cardston and about a hundred miles from Lethbridge.

Waterton Lakes park is something more than a Canadian resort, its situation makes it, in fact, an international playground. That portion of the state of Montana which adjoins it has been set aside as the Glacier National park of the United States, the boundary between the two countries running through Waterton lake.

From the entrances of the park there are smooth, gravelled roads, leading to the village where on pleasant, shaded streets a number of summer cottages, many of them facing on the lake, have been built. Here, too, will be found the hotel and chalets, the dance pavilion, swimming pool, restaurants and stores, all catering to the needs of the summer visitor. The camp sites adjoin the village and there, under canvas, many of the visitors to Waterton lakes elect to stay. Both the camping areas have wide views over the majestic lake which gives the park its name, and both are equipped with various small conveniences for tourists. Recreation of the most varied kind is open to all, both young and old. For the angler is offered the joys of fishing in Waterton lake itself and in the many jewelled lakes set in the adjoining mountains. One may row to the many quiet bays or excursions may be made by motor boat to various parts of the lake, including Boundary Cabin, Hell Roaring Canyon and to Glacier park at the southern end of the lake. While many bathers take a dip in the cool waters of Waterton lake the majority prefer the somewhat warmer waters of Linnet lake near by, where the Government has built a bath-house with dressing rooms and verandas. The Government has also constructed excellent tennis courts near the village

(Continued on page 4.)

SEA-BIRD SANCTUARIES ATTRACT BIRD LOVERS

Thousands of Birds Present Thrilling Spectacle—Ten New Sanctuaries Established

From the days of Jacques Cartier onward the islands of the gulf of St. Lawrence have been known as the homes of myriads of sea-birds—gannets, eider ducks, puffins, cormorants, terns, and many others—and the sanctuaries which have been established in this area are magnets which year by year draw increasing numbers of naturalists and bird lovers.

In the past, particularly during the nineteenth century, the more valuable of these birds were so harassed that their numbers rapidly dwindled. In recent years, however, the protection they have received because of the Migratory Birds Convention Act has enabled them to nest in greater safety and to make good part of their previous losses. Because of the setting aside of new sanctuaries in 1925 it is expected they will make even more rapid gains in the future.

The first sanctuaries in the gulf of St. Lawrence were established in 1919, by the Province of Quebec and the Dominion Government. These included the Bird Rocks of the Magdalen islands, and Bonaventure island and Percé rock on the Gaspe coast. In 1925 ten additional sanctuaries were established by the Dominion with the consent of Quebec along the north shore of the gulf. The north shore sanctuaries are dotted along a line roughly four hundred miles long stretching from Birch islands (four hundred miles east of the city of Quebec) to the straits of Belle Isle. Named in order from west to east they are: Birch Islands, Betchouane, Watshishow, Fog Islands, Wolf Bay, Cape Whittle, St. Mary Islands, Mecatina, St. Augustine, and Bradore Bay.

The two groups of sanctuaries, the one on the Gaspe coast and the other on the north shore, are so different in regard to transportation methods and bird inhabitants that they are best dealt with separately. In the new group along the north shore the chief bird inhabitants are puffins, razor-billed auks, eider ducks, gulls, and terns. In 1925 the Migratory Bird Officers of the Canadian National Parks Branch of the Department of the Interior took a census by actual count and careful estimate and found on these ten sanctuaries a bird population, excluding shore-birds, of 84,706, embracing fifteen species. This, of course, is only a fraction of the bird population of the entire coast.

These sanctuaries can be visited with comparative ease for the north shore of the gulf of St. Lawrence is served in summer by well-appointed and comfortable steamers with weekly sailings from the city of Quebec. There are no hotels near these sanctuaries but in most instances good board in private houses can be obtained. Bird lovers who are also campers and yachtsmen or motor boatmen find this a veritable paradise.

On these islands some of the most attractive and best known of our sea-birds can be studied in their homes, and, those who have visited the islands are enthusiastic over the opportunities, in the hundreds of little harbours formed by the islands or in sheltered nooks on shore, of watching at close



Sea-bird Sanctuaries in the Gulf of St. Lawrence—View of Percé, Quebec, showing Percé Rock and Bonaventure island. Inset—Family group of gannets on a nesting ledge of Bonaventure island.

range the movements of the quaint puffins, the thrilling flight of hundreds and hundreds of eider ducks, or that of the splendid Caspian terns with their red beaks and raucous voices.

The bird sanctuaries off the coast of Gaspe are much better known than those of the north shore. Their bird inhabitants embrace many of the species found in the latter, but their chief attraction to bird lovers lies in the colonies of gannets which nest upon them. This magnificent bird is known to nest only in three or possibly four places on this continent, all of them in British North America. All the colonies are more or less difficult of access except the one on Bonaventure island. Bonaventure island is only about three miles from the village of Percé, Quebec, and hundreds of visitors are rowed out to it every summer from that place. Bonaventure island is about three miles long by a mile and a half broad. On its seaward side are great cliffs of red sandstone, the broad ledges of which form secure nesting places for throngs of sea-birds.

"Approaching from the sea," writes Mr. P. A. Taverner, ornithologist of the National Museum, Ottawa, "one is aware that every ledge and shelf is covered with white, as though snow had piled in drifts upon them, allowing only the overhangs to show dull red between the glistening surfaces. A wind seems to stir the white masses, and they blow off in eddies and clouds of drifting flakes that finally resolve themselves into great white birds that swirl about the cliff faces and circle round the intruder amid a pandemonium of hoarse cries. These are the gannets, the solan geese of older authors, each as large as a goose, pure white with black wing-tips and a slight creamy wash on crown and hind neck. The air is filled with their waving wings. They fill it like a swarm of giant midges circling in the sun."

The effect of this picture upon those who view it for the first time is almost indescribable and even those who have rowed about the island daily for years confess that they can never behold the scene without a thrill of emotion.

Percé Rock, so named from the fact that it is pierced by a great natural archway, 80 feet wide, through which one may pass in a small boat, lies only a few hundred yards from the village. It is an isolated mass of limestone about 1,500 feet long and 300 feet wide. Its unscalable, perpendicular sides rise to a height of almost 300 feet and the top thus provides a safe retreat of which the birds have not failed to take advantage. The Gaspé bird sanctuaries, combined with other attractions such as beautiful shore and forest scenery, bathing, fishing, and boating, have

for years drawn hundreds of tourists so as to tax the accommodation of the modern summer hotels and boarding houses of the locality, and to dot tents about the abundant camping spaces. Percé is reached via the Canadian National Railway system, connection being made at Matapedia with an independent branch line, and is also accessible by automobile.

CANADA'S PULP AND PAPER INDUSTRY

(Continued from page 1.)

Newsprint Production

Year.	Tons. Produced.	Tons. Exported.	Percentage
1917	689,847	596,187	86.4
1918	734,783	636,533	86.6
1919	794,567	708,429	89.2
1920	875,696	761,944	87.0
1921	805,114	709,241	88.1
1922	1,081,364	959,514	88.7
1923	1,251,541	1,137,962	91.0
1924	1,388,081	1,219,384	87.8

EXPORTS AND IMPORTS

The exports of these products, particularly paper, are among the most important items in the external trade of the Dominion and they exert a marked influence in stabilizing exchange. This was particularly noticeable during the period of trade depression following 1920. The total exports of the industry in 1924 amounted in value to \$153,027,527, and the imports to \$10,703,933, resulting in an excess of exports over imports of \$142,323,594. The distribution is shown in the following table:

	Exports.	Imports
Pulpwood...	\$13,536,058
Woodpulp.	40,242,972	\$1,375,991
Paper...	99,248,497	9,327,942

The imports consisted chiefly of special lines of pulp and of cardboard, cardboard containers, and book, writing, and wrapping papers.

In analysing the figures in the above tables it is seen that while there has been a rapid increase in production of all three lines, the proportion of exports to total production in pulpwood and pulp has been declining almost steadily, whereas in regard to paper the proportion exported has remained fairly constant.

Newsprint is, of course, the great staple in the paper trade. In 1924 Canada was the second country in the world in point of quantity produced. During some months of 1925 Canada forged to the front place and it is expected that in 1926, having in view the large installation of paper plants in 1925, Canada's production will be increased to such an extent as to rank

EARLY VOYAGEURS AND CANADA'S PLACE-NAMES

Lake of the Woods Was Known by Various Names in Time of Fur Traders

The investigations of the Geographic Board of Canada indicate that the early voyageurs did not go far afield for names for the lakes and rivers on their routes of travel. More than one well-wooded lake bears the name lac des Bois or Wood lake, but the largest and best known of these is the lake of the Woods on the International Boundary between Ontario and Minnesota.

The first-known mention of the lake occurs in a memoir of Michel Begon, who was Intendant of New France from 1710 to 1726, though he did not reach Canada until 1712. This memoir, which is dated 12th November, 1716, narrates an exploratory journey made in 1687 or 1688 by Jacques de Noyon, a native of Three Rivers. De Noyon ascended the Kaministikwia river, which falls into lake Superior at Fort William, wintered at Rainy lake, and in the following spring reached "lac aux Iles, otherwise called Asiniboiles," on entering which "to the left the country is barren and on the right hand side it is provided with all sorts of trees and filled with numerous islands." Lac aux Iles and lac aux Asiniboiles are evidently French renderings of the names by which the lake was known to the Indians. Indeed, the French historian Margry states that "Minitie" is an Indian name found in Verendrye's journals. This is the Cree word "ministik," which means "island." The French for Island lake is lac aux Iles. Lac aux Asiniboiles means "lake of the Assiniboines," a tribe of the Sioux Indians from the headwaters of the Mississippi, whose first Canadian habitat was the region of the lake of the Woods. It is as lac des Assenipois (Assiniboine lake) that lake of the Woods figures on numerous French maps published about 1719.

Lake of the Woods is first mentioned by the French equivalent (lac des Bois) in Verendrye's accounts of his explorations in 1732 and later years. Of all early travellers, Verendrye is the most closely associated with the lake. He built fort St. Charles near the Northwest Angle in present Minnesota in 1732, and four years later his son, a priest (Father Aulneau) and their company of nineteen were massacred by Sioux while camping on an island in the lake. At least three islands are claimed to be the scene of the massacre. A memorial chapel to the victims has been erected on an island in latitude 49° 17', longitude 94° 46', and for this the Geographic Board of Canada has recently approved the name Massacre island. Since Verendrye's time the name lake of the Woods has been in general use.

her the greatest newsprint-producing country in the world.

These facts serve to emphasize the importance of the industry and the need of each citizen doing his part in the conservation of Canada's forests, upon which this development depends.

The production of gold in Canada rose from 1,525,382 fine ounces valued at \$31,532,443 in 1924 to 1,730,000 ounces with a value of \$35,768,000 in 1925, according to the Dominion Bureau of Statistics.

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OTTAWA, FEBRUARY, 1926

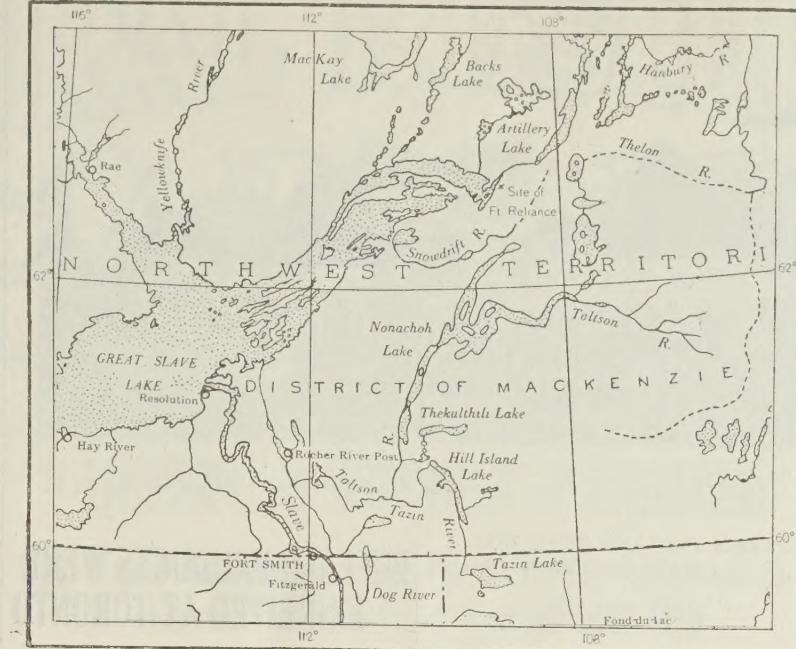
DISCOVER LAKE DURING EXPLORATORY SURVEY

Topographic Surveyors Traverse Great Unknown Area Southeast of Great Slave Lake

During the past season, in carrying out work under the Topographical Survey of the Department of the Interior in the Northwest Territories a party in charge of Mr. G. H. Blanchet explored and surveyed that great, almost-unknown, district, 60,000 square miles in extent, lying between lake Athabasca and Great Slave lake and eastward from Slave river to Dubawnt river.

Over 600 miles of interior waters were travelled during the season's work, in the course of which a lake one hundred and fifty miles long and several miles wide was discovered; portions of the headwaters of three great rivers of the North, the Taltson, the Thelon, and the Snowdrift were traversed by canoe, and much territory heretofore untraversed by white men was surveyed. Previous knowledge of the area was limited to that gained by Samuel Hearne during his easterly journey across it in 1772; and the more recent explorations of Mr. J. W. Tyrrell, D.L.S., on the lower Thelon river, and Dr. Charles Camsell on the lower Taltson river. Most of this year's work was original exploration.

The party started out from Fitzgerald on the Slave river on June 12. As the greater part of the country to be traversed was entirely new, efforts were made to engage Indians as guides but with little success, the Indians agreeing only to accompany the party to a certain point beyond which they would not go. From Fitzgerald the Indian canoe and the 19-foot freighter, containing the surveyors' equipment, followed a route well known to the Indians between the Slave river and the Taltson, arriving at the latter a short distance below where the Tazin river joins it. Proceeding up the Taltson, the surveyors entered country absolutely unknown and with supplies reduced so that they had to depend largely on what fish and game they could secure, they pushed on into the interior. Three days later the Indians turned back, and the four white men



Discover Lake During Survey—Map showing territory traversed during exploratory survey in Great Slave Lake district, and "Nonachoh" lake, the new body of water found by the party. Much valuable geographical information was secured during this trip.

were thrown on their own resources and with only meagre information gained from their late companions. Immediately after the departure of the Indians, the party reached a lake, which the Indians called "The Big Lake." It proved rather a series of long narrow lakes seldom more than two miles wide and separated only by cascades at a few points where rock ridges crossed the valley and which culminated in an oddly shaped lake, nearly 75 miles long with a 50-mile bay stretching away to the northeast. This is called "Nonachoh" or Big Point lake by the Indians.

After four days searching the mouth of the Upper Taltson river was discovered emptying into the lake. The upper river was followed to the limit of navigation but it was found to rise in country unfavourable for further travel into the interior. A return was made to Nonachoh lake and a base was established at its most northeastern point. From here two members of the party travelled overland carrying a small collapsible canoe, and after some searching discovered an ancient Indian portage route, marked by a few small cairns, which led by a number of lakes across the divide to waters draining to Hudson bay. A moderately rolling plain was reached across which stretched a big irregular lake full of large islands. On this plain the edge of the woods is marked by an occasional clump or fringe. In the lake the Thelon river apparently has its main source, probably the westerly branch as found by Mr. Tyrrell's exploration upstream to the forks in 1900. The course and character of the Thelon was determined and the party returned to the base.

As a trip down the Thelon, up Hanbury river, and thence by Ptarmigan and Artillery lakes to Great Slave lake would entail too much heavy portaging for the big freighter and outfit, it was decided to seek a portage route from the Taltson to the Snowdrift river, and on to Great Slave lake. The Snowdrift had been placed on the map by Hearne from Indian report and its mouth at Great Slave lake had been located during the survey of the lake in recent years. Following the northeast bay of Nonachoh lake the portage to Snowdrift river was found through a shattered defile between hills and occupied by a small lake. The trip down

the Snowdrift showed it to meander from side to side of its open, sandy valley until about 20 miles from its mouth when it enters the hills and makes a descent of about 600 feet in the next 15 miles, by means of a series of cascades and falls, culminating in Glory falls, a drop of 60 feet. It then eases itself into the clear sparkling waters of Great Slave lake.

The season's work which entailed many miles of canoe travel and heavy portaging through the unknown interior, revealed an excellent series of waterways giving access to a great stretch of country and providing a highway for travel by which the lingering ice of Great Slave lake may be avoided in springtime. These waters lead to the interior country from which the Indians occasionally bring samples of minerals and in which the geological situation is promising to the prospector.



A vegetable garden near Frog portage on the Churchill river in northern Manitoba. Good soil occurs only in small patches in this vicinity and on these gardening may be successfully carried on.

INCREASED LOBSTER CATCH

The lobster fishing season of 1925 on the Atlantic coast of Canada closed with an increased catch over the previous year of 7,436,200 pounds. The total catch since the commencement of the lobster fishing season was 33,839,000 pounds, from which 8,313,400 pounds were shipped in shell, and the balance canned, making 127,544 cases. In the same period in the preceding season the catch was 26,402,800 pounds, of which 6,177,800 pounds were used fresh and 101,215 cases canned.

INTEREST AROUSED IN LEAD AND ZINC MINING*

High Prices For These Metals Induce Further Investigation of Deposits in Eastern Canada

The continued high prices of zinc and lead, and the activity of representatives of European smelters searching for new sources of supply, in 1925, have aroused considerable interest in Eastern Canada's latent possibilities for increased production of these metals. The more so, as it has been evident that financially powerful corporations on this side of the Atlantic, also, are ready to take advantage of the opportunity afforded by the large quantities of cheap hydro-electric power now available and seeking a market to establish an electro-chemical zinc-reduction plant in Eastern Canada as soon as they can satisfy themselves that sufficient ore to keep such a plant in operation will be forthcoming. As a result of all this, eastern producers of zinc and lead ores have speeded up development and increased their output; and numerous prospects, old and new, are being explored in search of commercial ore bodies. In fact there are very few of the known occurrences of zinc and lead in Eastern Canada that have not been at least examined recently by prospective purchasers or operators.

In Nova Scotia shaft-sinking is now in progress on the Stirling zinc-lead prospect in Cape Breton, and the old Smithfield lead mine near Truro, in Colchester county, is being put in shape for further exploration of the ore bodies. In Quebec, the British Metals Corporation have made a number of improvements both in their mine and mill at Notre-Dame des Anges, that have resulted in a considerably increased output; and further diamond-drilling has been done on the Federal Zinc and Lead Company's mine in Gaspé, though actual production has not yet been undertaken. In Ontario, the Kingdon Mining, Smelting and Manufacturing Company are preparing to further increase the output of their Galetta lead mine; the old Frontenac lead mine, near Kingston, has been pumped out and examined, as has also the old Wright mine on lake Timiskaming, where diamond-drilling is now being carried on from the bottom of the old workings; diamond-drilling is also being done in a search for zinc-lead ore bodies just west of Sudbury; and one of the Cobalt mining companies is reported to be about to start exploratory operations on a zinc prospect near Renfrew.

A most promising new source of zinc in Eastern Canada is the goldfield of northwestern Quebec, where zinc in the form of sphalerite is found associated with the copper-gold ores. Interest in this new field, however, has been so concentrated on the more valuable metals, gold and copper, that little attention has as yet been given to its further possibilities as a producer of zinc.

*Prepared under the direction of Dr. Charles Camsell, Deputy Minister of Mines, by Mr. A. H. A. Robinson, of the Mines Branch.

It is estimated by the Department of Agriculture that the bee-keepers of Canada gather 21,000,000 pounds of honey a year.

DOMINION OBSERVATORY INVESTIGATING METEOR

Additional Information on Phenomenon of December 29 Is Being Sought

An unusual and striking phenomenon was seen in the evening sky of Tuesday, December 29, about 5.25 o'clock, when a bright meteor, leaving an illuminated path which lasted for many minutes, lighted up the landscape over portions of southeastern Ontario, southwestern Quebec, and adjacent parts of the United States.

Meteors are known to be small bodies revolving in orbits, similar to that of the earth, around the sun, and controlled by its gravitational force. From time to time individuals of this innumerable horde, which are all normally dark and invisible, collide with the earth's atmosphere, and are immediately rendered incandescent by the friction arising from their terrific speed, which may in some cases reach to as much as 30 or 40 miles per second. As they are of all sizes, varying from mere specks to masses of many tons, they may be either burnt up in a fraction of a second, or in extreme cases may penetrate the earth's atmosphere and fall on its surface; or sometimes may only graze the atmosphere and escape again into space. Many thousands of such collisions occur every day, and were it not for the protecting blanket furnished by the air we should be continually and unbearably pelted by these celestial visitors, even to the point of rendering the earth quite uninhabitable.

The particular meteor in question, judging from the position in which it appeared, must have overtaken the earth in its orbit around the sun, and as a consequence its apparent speed was relatively slow—probably not more than a very few miles per second. Such slow-moving meteors are also called fireballs. From its unusual brightness it must have been of considerable size, but so far as present reports show it did not fall to earth as a meteorite, and must therefore either have escaped again into space or, perhaps more probably, have been entirely consumed before reaching the earth's surface.

Observers in Ottawa and the eastern part of Ontario and neighbouring parts of Quebec saw the phenomenon in the southwest, while those north of lake Ontario and west as far as Hamilton, lake Simcoe and Grey county, saw it in a southerly or southeasterly direction; New York and Massachusetts observers apparently saw it in the northwest. It seems likely that somewhere in the region south of lake Ontario it should have been seen overhead, travelling in a general northerly direction. Unfortunately very meagre details from that section of the country have at the time of writing reached the Dominion Observatory, which is collecting information from all available sources, but more particularly in Ontario and Quebec. A large number of reports have been received at Harvard College Observatory, of Cambridge, Mass., and it seems likely that a fusion of all the data may serve to definitely settle the direction and extent of its path, as well as the elevation.

The study of meteors has a contact with so many branches of astronomy that it is desirable to investigate such phenomena as that of December 29 as thoroughly as the records will permit. The Dominion Observatory, Ottawa,



Prairie Indians Crop of 1925—Threshing operations on one of the Indian reserves in the Prairie Provinces of Canada. Note the modern machinery used by the Indians to handle their big grain crop.

WESTERN INDIANS REAP BIG GRAIN HARVEST IN 1925

(Continued from page 1.)

yield of wheat is estimated at about 17.5 bushels per acre.

In stock raising the Indians have been equally successful. Their herds have greatly increased during the past ten years and they now own 22,468 head of horses, 23,457 head of cattle, and a considerable number of other domestic stock. The careful selection of sires by the Department has given the Indians some of the best range cattle in the Prairie Provinces, as shown, among other ways, by the number of prizes won by them in the last few years at the feeder and stocker shows at Winnipeg and Chicago.



Indian-owned cattle in the pens on one of the reserves in Western Canada. The quality of these herds is being steadily improved.

Each year a greater amount of improvement work is being done on Indian farms and the cultivation of the land is being carried on with increasing care. The cultivated area was increased 11,239 acres during 1925, bringing the total up to 104,495 acres, and of this 66,429 acres were sown to grain. Summer-fallowing was done on 28,244 acres, and 9,822 acres of new land were broken.

The continued advancement and growing prosperity of the Indians in the Prairie Provinces confirm the belief long held by officers of the Department of Indian Affairs that given an opportunity the Indians would in time become self-supporting and independent. Progress was slow at first but in recent years results are increasingly apparent and the indications are that in the future they will advance at an accelerated rate.

would be glad to receive definite information from observers anywhere, more particularly as to the exact direction and position in which the meteor was seen, as well as the direction of motion and length of the apparent path in degrees; any other available details would also be welcomed.

PROTECTING SOURCE OF NATIVES' FOOD SUPPLY

Expedition Sent Into Northwest Territories to Suppress Wolf Menace Killed 188 Animals

The protection of the game supply of the Northwest Territories has been given special consideration by the Dominion Government during recent years. Particular attention has been directed to the caribou, on which the natives, Indians and Eskimos, who are the wards of the Government, depend for food, clothing, and other necessities. The valuable wild life is protected for the natives by means of preserves (in which all whites are prohibited from hunting) and by bounties for the destruction of wolves. The preserves, five in number, aggregating 241,800 square miles, have been set aside by the Department of the Interior and are administered by its North West Territories and Yukon Branch.

During recent years further steps have been taken to suppress the wolf menace by outfitting wolfing expeditions and sending them into those parts of the north country in which wolves are known to congregate, particularly to the east of Great Slave lake, where a heavy toll of the caribou is taken during the spring and fall migrations.

During the season of 1922-23 a party of three, operating in this region, secured 135 wolves. The success of this experiment was most gratifying and in July, 1924, a party of four, with provisions for a year, was sent to the Great Slave Lake area. This expedition returned to Fort Smith in July, 1925, after an eventful trip with a bag of 186 wolves and 2 wolverines.

BUFFALO PRODUCTS WERE EXHIBITED AT TORONTO

Display Arranged by Canadian National Parks at Royal Winter Fair Attracted Attention

An interesting exhibit at the Royal Winter Fair, held at Toronto during the early winter, was the collection of modern buffalo products displayed by the Canadian National Parks Branch. As a result of the success of the Government buffalo herd in the Wainwright Park, buffalo robes, buffalo coats and pemmican are once more on the market. There never was a skin, as every early pioneer knew, which could compare with the buffalo's in warmth and durability. Of recent years, however, they have entirely disappeared from the market and their return has been welcomed both by those who prize them as rarities and also by those who recognize their serviceability and warmth.

Among the exhibits were a number of stylishly cut and attractive buffalo coats for ladies and gentlemen; floor rugs and lined robes for motors or sleighs. The display attracted much attention and practically the entire stock of articles offered for sale was disposed of by the close of the fair.

GOOD PROGRESS IN MINERAL PRODUCTION IN CANADA

Mining, now third in rank among Canada's primary industries, contributes extensively to the wealth and prosperity of the Dominion, according to the Dominion Bureau of Statistics. Large tonnages of freight move from and to the mines; many subsidiary industries depend upon the mining industry for their prosperity. Canada's progress in the production of mineral wealth has been notable particularly in recent years and the developments in established fields, the discovery of new mineral areas and finally the surpassing of all previous records stamp the mineral industry as one of the greatest factors in Canada's industrial and commercial life.

Jasper National Park in northern Alberta, with an area of 4,400 square miles, is one of the largest "playgrounds" in the world. A part of this reserve to the north of the central section is still unexplored, but the park is being rapidly opened up by the construction of trails and highways.

WATERTON LAKES NATIONAL PARK MOST ATTRACTIVE

(Continued from page 1.)

and these are available without charge to the visitor. The beauty of the golf links at Waterton remains long in the memory, the wide sunlit fairways, the snowy mountain peaks beyond, and the occasional glimpses of lakes and flowered meadows make the course one perhaps unexcelled for beauty of surroundings in the Dominion. For those more adventurously inclined there are mountain ways to climb and trails to follow to shadowy forest depths and blue lakes. On such wanderings the deer and the mountain goat and sheep will be encountered.

During last summer work was commenced on a new highway within the park and in course of time this road—the Akamina highway—will enable the motorist to go by a short route through a country of wild grandeur from Waterton to Glacier park.

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CANADA'S FORESTS OF VITAL IMPORT TO ALL CITIZENS

ROYAL PROCLAMATION ISSUED

April 18 to 24 Inclusive Set Aside As Save-the-Forest-Week

His Excellency the Governor General has issued a Royal Proclamation appointing the week of April 18 to 24 inclusive, to be observed as "Save-the-Forest-Week".

The issuing of the proclamation indicates the importance of this subject to all Canadians and calls attention to the causes which render a vigorous campaign necessary, as well as to the best methods of carrying out the principles of conservation.

The reasons for setting aside this period as Save-the-Forest-Week are given as follows:—

The protection and perpetuation of our forests are vital to the continued industrial welfare and national strength of Canada and to the health, comfort and prosperity of our people.

The tremendous economic loss through forest fires continues year by year without appreciable diminution; and Canada's future prosperity is seriously menaced by these recurrent holocausts.

The experience of all forest authorities in Canada has abundantly demonstrated that the forest fire problem can be solved only with the full sympathy, assistance and active support of all the people, practically expressed by increased individual care with fire in the woods, and an insistent public demand for proper precaution against fire on the part of all workers or travellers in or adjacent to the forest.

It is imperative that in the public mind there should be thorough recognition of the fact that pleas of ignorance or thoughtlessness cannot possibly compensate the victims of fire's ravages nor condone the contravention of the law; that in truth, not fire but the hand that lights it is the public enemy; that in the national interest such ignorance and thoughtlessness cannot be further tolerated; and that responsibility must be fixed on the individuals concerned and the penalties provided by law imposed.

Forest fire prevention demands education and publicity concerning the real situation with respect to our forest fire losses; and it is customary to set aside a week in each year known as Save-the-Forest-Week, in which the attention of the people of Canada may be specially directed to this matter.

(Continued on page 3)

QUEBEC A TOURIST PARADISE

Old World Atmosphere and New World Progressiveness Charm Visitors--Ideal Recreational Area

The province of Quebec, the largest of all the Canadian provinces, has within its boundaries some of the most inspiring playgrounds in America. It is a province extending 1,100 miles from east to west and 1,300 miles from north to south, having an area of nearly 700,000 square miles of farming lands, of forests

owing to the efforts of its Government, are well supplied with good provincial highways and improved municipal roads, by means of which numberless places of interest may be visited; and each successive season larger numbers of tourists are taking advantage of the excellent motoring facilities available. Railway



In Picturesque Quebec—The City of Quebec the "Gibraltar of America" seen from the river St. Lawrence. On the extreme left is the Citadelle; leading from that to the centre is the Dufferin Terrace, one of the finest promenades in the world. Above the Terrace is the Chateau Frontenac. At the extreme right looms up the huge bulk of the main building of Laval University. In the foreground are to be seen the wholesale and shipping district and, at the wharves, ocean and river steamers.

and well wooded sections, of mountain ranges and picturesque valleys, of scenic rivers and lakes, and historic points of interest dating back to the period of the earliest discoveries. The geographical position, the immense and as yet unpeopled hinterland, full of potentialities of resource and adventure, the old world atmosphere and the new world progressiveness, unite to make the province unique as an ideal recreational country.

Owing to the vast extent of the province there is considerable variation in climate but, excepting the district of Ungava in the north, pleasantly warm days and cool evenings are characteristic of the summer in the province of Quebec, while autumn is a charming season throughout the province. Though cold, the winter is most exhilarating, for the atmosphere is dry and bracing with an abundance of sunshine, which is highly conducive to open air sports such as tobogganing, snow-shoeing, skating, and skiing. All seasons offer exceptional opportunities for sport.

Splendid facilities for travel are provided by highway, rail, and water. The older settled portions of the province,

lines, belonging nearly all, to the two great systems, the Canadian National and Canadian Pacific, and giving high-class service, connect practically all populated sections with the other provinces of the Dominion and with the United States. Large areas in the Laurentian Highlands and the beautiful Lake St. John district are also accessible by rail. The St. Lawrence, one of the greatest and most majestic of rivers, and the gulf of St. Lawrence, upon which ply large and well appointed steamers, constitute an unsurpassed entrance to the heart of a continent.

The old city of Quebec, the capital of the province, is perhaps the most historic spot in North America. Other places which witnessed the landing of discoverers or, later on, battles for supremacy, have become almost desert seashore or have been modernized beyond recognition, but stone-built, citadel-crowned Quebec, the "Gibraltar of America" preserves a piece of the Old World in the midst of the New. Inside the massive walls, the tortuous streets, famous churches, and quaint houses recall ancient Normandy, while

(Continued on page 2)

POPULARITY OF TRAIL-RIDING IN CANADIAN ROCKIES

UNKNOWN AREAS HOLD ATTRACTION

Big Game, Exploration, and Glorious Adventure Beckon to Holiday-Seekers

The extent and richness of the Canadian Rockies are seldom realized even by Canadians themselves. So vast, indeed, is the area involved that only an approximate idea of its extent can be reached. A recent estimate of the Topographical Surveys Branch of the Department of the Interior places the mountain area of the cordilleras north of the International Boundary at 600,000 square miles. When it is remembered that the entire area of Switzerland is only 15,000 square miles and that less than one-half of this is truly mountainous, some comparative idea of the extent of the Canadian alps may be obtained. The Canadian National Parks alone include 10,000 square miles, an area greater than some European countries, but they form only a small fraction of the total mountain area. Even within the park boundaries, although they are probably the most developed section of the mountains, large areas are still unmapped and even unexplored and dozens of unclimbed and unnamed peaks await the adventurous.

As yet the great majority of the tourists have only touched, as it were, the margin of the great inland sea of mountains. In building the railways the engineers naturally sought the lowest passes and least difficult routes rather than the finest scenery, but it so happens that both the Canadian transcontinental railway lines pass through and give access to wonderfully rich scenic regions. Banff, Lake Louise, Moraine, and Emerald lakes, the Yoho and the Illecillewaet valleys, Jasper, Maligne lake, Tonquin valley and mount Robson are rightly counted among the great landscapes of the world and they are all within reach of the ordinary visitor to the national parks. Yet they do not by any means exhaust the wealth of the Rockies. Within the parks themselves and beyond, along those farther trails to which the parks give access, lie other regions, as yet little known, which are unsurpassed in interest and beauty.

For it undoubtedly adds very much to the attractions of the national parks that in addition to the rich regions within their own borders, they are the gateways to new and wonderful sections beyond. For many years Banff and

(Continued on page 4)

DEVELOPMENTS IN MAPLE SUGAR INDUSTRY

Methods of Gathering Canada's Annual Crop Have Changed Since Early Times

Chemists long ago called attention to the curious and important fact that wood, sugar, and starch all contain the same chemical elements. The theory is that the differences in the commodities are due to the various ways in which the atoms of the elements are combined. For fifty years chemists have sought to find the key to change cheaply one combination into another, for as soon as that be found the major part of the food problem of the world, they say, will be solved. Many Canadian chemists have made sugar from wood but the cost has, up to the present, always been prohibitive. So far, they have failed to do it economically—all except one, for in spring the oldest of them all, Dame Nature, touches the Canadian maple with her wand, out flows the sap and behold the sugar!

The sap of all maples contains sugar and in pioneer days, in times of scarcity, even the Manitoba maple, the least productive of the family in this respect, was tapped for the purpose of boiling the sap to obtain sugar. In commercial practice, however, only the hard or sugar maple (*Acer saccharum*) is tapped for sugar-making. In passing it may be noted that it is the leaf of this tree, the sugar maple, which is Canada's national emblem.

When Jacques Cartier came to Canada he found the Indians making sugar. They cut the bark with hatchets, and by wooden spouts directed the flow of sap into birch-bark pails (called "casos" or "rocans" by the Indians) and boiled it down in earthenware pots. The first white settlers learned the art of maple-sugar making from the Indians and the industry has been carried on from that day to the present. In Indian and pioneer days in Canada when the maple was almost the only source of saccharine matter, maple sugar was a necessity; to-day it is esteemed as a delicacy or luxury and sells for two or three times as much per pound as cane or beet sugar.

The early settler improved upon Indian methods by substituting metal kettles for the clay pots, and wooden buckets for birch bark ones, and to-day still further improvement has been made by the use of modern evaporators installed in buildings, and by the collecting of sap in tin receptacles. With each change there has been an improvement in the quality of the product. This is now much lighter in colour than of old and its delicate maple flavour is unmixed with that of smoke, ashes, or other foreign substances.

In many districts, of course, the keeping by a farmer of a "sugar bush" and the making of maple sugar is but a passing phase of agricultural development, but there are others where, owing to particularly suitable conditions, sugar-making bids fair to become as permanent as apple orcharding. These conditions include a maple grove situated on a hillside of considerable extent and too steep or too stony to be suitable for field culture. In such a situation, where the owner intends to maintain a permanent sugar bush, the evaporator house is placed at the bottom of the slope. In the spring when operations are to begin an array of bright tin tubes, two inches or so in diameter, and totalling hundreds of yards in length,



In Picturesque Quebec—View along a provincial motor highway, where it skirts one of the many rivers, with typical village in the distance.

are brought out from storage and erected in long lines radiating from the evaporator house up the hill and extending to all parts of the grove. The sap is collected in tin pails hung against the trees. These are provided with covers which keep out rain or snow, dead leaves and dust. When a pail is full the worker replaces it by an empty one and empties the full pail into one of the funnels fixed at convenient intervals along the tubes. From the tubes the sap pours into a tank inside the evaporator house, and from this it is drawn off as required through taps placed over the evaporator pans. The sap is then evaporated to the syrup or sugar stage as desired.

By this means the product is kept free from foreign substances, also the amount of labour required is reduced to the minimum. Wood is generally used as fuel and it is customary to go over the grove in the winter and cut out all dead and undesirable trees and to skid these down the hill, into the woodpile, for the spring operations. In permanent groves provision is also made for planting saplings and encouraging young trees to fill open spaces or take the places of trees that have died.

The chief centre of the maple sugar industry is that part of Quebec south of the St. Lawrence known as the Eastern Townships. The other provinces in which maple sugar is made are Ontario, Nova Scotia, and New Brunswick, in the order named.

The quantity of maple sugar produced in any year is affected by a number of factors including prices of other sugars, state of trade and the climatic conditions which increase or decrease the "run" of sap. The output in 1925, according to the Dominion Bureau of Statistics was larger than in 1924, but owing to lower prices the value was somewhat less. The average price was 17 cents per pound for sugar and \$2.05 per gallon for syrup. The following table gives the figures for 1925.

Province	Sugar lb.	Syrup gals.	Value
Quebec...	9,549,837	954,984	\$3,332,893
Ontario...	78,322	704,903	1,716,047
Nova Scotia...	89,910	10,139	54,146
New Brunswick...	73,290	2,067	29,735
Totals...	9,791,359	1,672,093	\$5,132,821

The preliminary estimate of the total yield of potatoes in Canada in 1925 is 44,497,000 cwt. from 545,891 acres, as compared with 56,648,000 cwt. from 561,628 acres, in 1924, according to the Dominion Bureau of Statistics.

UPWARD TREND OF FRUIT PRODUCTION

Canada's Output During 1925 Slightly Greater Than In the Previous Year

The production of commercial fruit in Canada has become an important industry and in 1925 the output had a value of \$25,553,212, an increase of \$49,866 over the previous year. Apple growing in Canada is by far the largest branch of the fruit-growing industry and last year the total production of commercial apples is estimated by the Department of Agriculture to have reached 3,580,770 barrels with a value of \$20,057,417. This was a slight improvement over the crop of 1924 which was 3,375,084 barrels valued at \$19,747,772.

The production and value of other fruits grown for commercial purposes are estimated as follows: pears, 113,582 bushels, \$249,185; plums and prunes, 79,562 bushels, \$154,288; peaches, 201,840 bushels, \$547,772; cherries, 114,925 bushels, \$409,210; strawberries, 8,070,000 quarts, \$1,458,950; raspberries, 1,947,000 quarts, \$401,690; other berries, 2,470,000 quarts, \$524,700; grapes, 25,000,000 pounds, \$1,750,000.

Statistics of the output of apples in the five principal producing provinces, show that Ontario has this year the lead as the greatest apple producer. Decreases in output in Nova Scotia, New Brunswick, Quebec, and British Columbia, are reported with a remarkable increase in Ontario. The figures by provinces for 1924 and 1925 are as follows:

	1924	Quantity (Barrels)	Value
Nova Scotia...	1,274,742	\$ 6,118,761	
New Brunswick...	86,615	454,728	
Quebec...	109,500	766,500	
Ontario...	918,080	4,884,978	
British Columbia...	991,147	7,522,805	
Totals...	3,375,084	\$19,747,772	

	1925	Quantity (Barrels)	Value
Nova Scotia...	956,056	\$ 4,302,252	
New Brunswick...	69,292	367,247	
Quebec...	109,004	741,227	
Ontario...	1,537,848	8,336,202	
British Columbia...	858,570	6,310,489	
Totals...	3,580,770	\$20,057,417	

Bic, Metis, and Gaspe on the St. Lawrence; Ste. Agathe, Nominingue, and Mont Laurier in the Laurentians; Wakefield, Blue Sea Lake and Maniwaki in the Gatineau valley; the picturesque country of the Saguenay; the St. Maurice valley; Timiskaming district; and the Eastern Townships.

The annually increasing throng of tourists who spend their holidays in Quebec find recreation and accommodation to suit every taste. In Montreal, Quebec, and the other cities there are palatial hosteries; in the tourist resorts scattered along river and gulf and in the mountains are excellent summer hotels; and in addition in these places and in the quaint villages there are good boarding houses and cottages where accommodation can be had at moderate rates.

Information covering all features of touring in Quebec will be furnished upon application to the Department of the Interior, Ottawa.

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OTTAWA, MARCH, 1926

The next issue of "Natural Resources, Canada," will be Save-the-Forest-Week number.

CANADA'S FORESTS OF VITAL
IMPORT TO ALL CITIZENS

(Continued from page 1)

The authorities of the United States of America and Canada have jointly agreed that, in view of the international aspect of the forest fire problem, it is expedient that the aforementioned Save-the-Forest-Week should be observed concurrently in both countries.

The proclamation proceeds to direct that during this period citizens shall be entreated earnestly to consider the above facts, should give careful heed to information disseminated by the various forest protective agencies and in particular should act on the following suggestions:

1. That settlers and others engaged in the clearing of land should fully observe the fire laws of the Dominion and of the province, which laws have been enacted for their protection, as well as for the preservation of our timber resources.

2. That at this time of the year, when thousands are looking forward to spending their summer vacations in the woods, all should take cognizance of the fact, that the camp-fire may, if neglected, easily result in disaster; and that to prevent repetition of such losses as have been annually sustained from this cause, all persons should familiarize themselves with the proper methods of building, using and extinguishing such fires.

3. That all travellers in forest regions should realize that cigarette or cigar butts, live pipe ashes and unextinguished matches are a very fruitful source of forest fires, and that nothing short of unremitting care by all concerned will decrease appreciably the losses through such causes.

4. That it is the duty of every citizen, on discovering a fire in the forest personally, to take what steps are possible to extinguish it, and if it be too large to be attended to unaided, to send advice at once to the nearest forest officer; prompt action along this line would, in the past have prevented many a disastrous conflagration.

5. That loggers, saw-mill operators and others interested in timber operations should see that all equipment and appliances designed to prevent the origin or spread of fires are overhauled and placed in a state of thorough repair; that such persons should review with care the fire protection requirements of the legislation under which



Fox Farming in Canada—Experimental Fox Ranch, Summerside, Prince Edward Island, looking toward the administration building and laboratory. The plant contains seventy breeding pens with room for expansion. Inset—Picture of one of the finest specimens of silver fox raised in Canada.

SILVER FOX FARMING IN CANADA*

New Experimental Ranch Established in Prince Edward
Island to Deal With Problems of Industry

Since the pioneers of the silver fox industry first demonstrated, twenty-five years ago, the financial possibilities connected with raising silver foxes in captivity, fox farming has made rapid strides and, in Canada, has already taken its place among the leading live-stock industries. It is estimated that there are now well over 100,000 silver foxes in captivity in the Dominion. Fox farming has rapidly spread to other countries, particularly the United States where Canadian silver foxes are being eagerly sought, and where, already, the silver fox industry has reached such proportions that it stands second only to that of the Dominion. Fox ranches have been started in Norway, Japan, Scotland, England, Switzerland, Belgium, France, Germany, Czechoslovakia, and other countries, and in each instance Canadian foxes are being used as foundation stock.

From time to time representatives of these countries visit various fox ranches in Canada to ascertain the possibilities of the industry and to obtain information regarding the care and management of silver foxes in captivity. The stimulus which created the silver fox industry and caused its rapid spread is the high price which can be obtained for the pelt of a prime silver fox. What effect the increased production of silver fox pelts will have on the price and to what extent the industry can be developed, without lowering the price of pelts below the margin of reasonable profit, are questions which naturally arise when discussing the future of the industry. While it is impossible to predict the future conditions of any particular industry, yet it will be of assistance to consider a few factors which have a bearing upon developments. The rapid decrease in wild fur-bearing animals and the ever-increasing demand for pelts has created a situation which it is questionable if any systematic attempts at raising fur-bearing animals in captivity will be able to meet. The superiority

of ranch-bred silver fox pelts to those of wild-caught foxes was early established and since then the former have brought the higher prices. The demand has always been for the high grade silver fox pelts, the supply of which has never been sufficient to meet the requirements. The industry has reached the stage where it is obvious that it is only possible to make a success by ranching silver foxes of high class and desirable qualities.

The leading fox breeders of this country are making great efforts, at no little expense, to improve the standard of silver foxes being raised in captivity. In co-operation with the Canadian National Live Stock Records and with the assistance of the Dominion Department of Agriculture, the Canadian National Silver Fox Breeders Association has been working out a system for registering high class pedigree silver foxes. In order to encourage this work persons, whether experienced or inexperienced, when buying silver foxes for breeding stock should purchase only those registered in the Canadian National Records.

In order to stimulate the growth of fox farming along lines calculated to better ensure the financial and economic future of the industry, the Breeders Association has established a modern ranch at Summerside, Prince Edward Island, the centre of silver fox ranching, where the various problems connected with the industry will be studied. This experimental ranch is equipped with seventy breeding pens and there still remains adequate space for further expansion. The breeding pens have been fitted with all modern improvements and the ranch has been stocked with high-class animals, registered and pedigreed, supplied by breeders in the vicinity of Summerside.

Realizing the importance of developing the silver fox industry and eliminating unnecessary wastage and loss, the Department of Agriculture is co-operating whole-heartedly in this move to build up the fox-ranching industry and has undertaken to operate the ranch as a part of the Experimental Farms system.

A large laboratory building, which will be equipped to control the operations of the ranch, has been constructed on the ranch property, thus enabling the investigation of all the biochemical, phy-

Prepared under the direction of Dr. J. H. Grisdale, Deputy Minister of Agriculture, by Mr. G. Ennis Smith, Experimental Fox Ranch, Summerside, P.E.I.

they operate; and that they should see that all employees working under their direction are properly instructed as to the danger of fire.

FOR ONCE BRUIN WAS
MUCH TOO VENTUREsome

Unusual and Amusing Experience of a Topographical Survey Party

In the course of a surveyor's work in the little explored regions of northwestern Canada many unusual and amusing events occur which through their frequency are taken as part of each season's fund of experiences. In the diary of the officer in charge of the Topographical Survey party engaged on the last section of the work of running the Sixth meridian northward to the Mackenzie river, the following incident is related:

"As we were camped on one of the islands of the Mackenzie river, with a view to watching for the boat that was to take us south, old Bruin paid us a visit—perhaps to bid us good-bye. We had just retired for the night, the cook was under the table, placed as usual out in the open. He had just fallen asleep when something sniffing at his head partly aroused him. Thinking it was the dog, the cook ordered the intruder off, accompanying the order with a back-hand slap. A loud snort of surprise and disgust fully awakened him and there in the moonlight staring down at him was a huge black bear. The cook's shout woke the rest of the camp and everybody reached for a rifle, an axe, or a club. We had seen no game all summer and here it was strolling into camp inviting trouble. The bear meat was tough but it was a gratifying change from the bacon; the hide was a beauty, with fine, silky, new hair, still unrudded."

siological, and anatomical phases of the life history of the silver fox. There have been some wonderful achievements in the development of other branches of live stock under domestication, such as the milking qualities of dairy cattle, the laying qualities and plumage of poultry, the speed of trotting horses, the development of draft horses, etc. It is believed that what has been achieved in these different branches of live stock can be attained by sound practical methods and good judgment in this case also, and that eventually there will be developed in captivity, a silver fox with inherent fur and other qualities vastly superior to those of its wild ancestor.

The leader of an exploring party of the Topographical Survey, Department of the Interior, reporting on a recent journey into the country east of Great Slave lake, says of the first sight of the previously unexplored Snowdrift river: "From the summit of a hill Snowdrift valley appeared a short distance ahead. The interest awakened in us by the sight of a new river to be explored was accentuated by a scene of great natural beauty. The valley is two to three miles wide and about 300 feet deep. It is floored with sand, which forms the river bed. Small hills of clean white sand look like breakers dashing against the valley walls. Groves of spruce, free from underbrush, border the river, and small sloughs represent old meanders."

The total area of the potato and other root and fodder crops of Canada in 1925 is estimated, according to the Dominion Bureau of Statistics, to be 12,181,713 acres, as compared with 11,862,921 acres in 1924.

REMARKABLE ACTIVITY IN COPPER PRODUCTION*

Last Year's Output in Canada Greatly Increased—Mining and Smelting Stimulated

The production of copper in Canada has so far been confined to the provinces of British Columbia, Ontario, Quebec, Manitoba, and to the Yukon Territory; although deposits are also known to occur in the Maritime Provinces and in the Canadian Arctic. The total output has varied in recent years but averages between fifty and sixty thousand tons of blister copper and copper matte per annum, a quantity of which is retained in Canada. The increased demand and the subsequent rise in price, however, have stimulated activity in the mining and smelting of the metal, and the production for the year 1925 has been one of the best on record, amounting to about 56,000 tons.

Operations have been started in British Columbia by the Consolidated Mining and Smelting Company of Canada, in the treatment of the ores which have accumulated at the Company's smelter and of the concentrates received from the Allenby plant near Princeton. After being idle for several years the latter property has been taken over by the Granby Consolidated Mining, Smelting and Power Company, which, with a milling capacity of 2,400 tons a day, is already handling about 1,000 tons. The Granby Consolidated mines, smelter and mill at Anyox are also working steadily. Part of the ore goes direct to the smelter and the balance is treated in the mill, which has a capacity of 1,000 tons a day. The Britannia Mining and Smelting Company's mines and mill at Britannia Beach have also been operating regularly to the full milling capacity of 2,500 tons. Work has also been resumed at the Kamloops Copper Company's mine at Kamloops, and the smaller operators throughout the province are also actively engaged.

In the Sudbury region of Ontario great activity persisted throughout the year. The nickel-copper ores of this area are mined, smelted and partly refined in Canada. The copper production derived from the treatment of the Sudbury ores amounts to about twenty thousand tons for 1925, two-thirds of which have been refined in this country, the balance being exported to the United States and Great Britain in the form of blister copper and copper-nickel matte.

In Quebec operations have been carried on by the Eustis Mining Company at Eustis, with an increased production due partly to the application of an improved method of selective flotation for treating the copper ores. The very encouraging results met with in the development of the Rouyn area of northwestern Quebec, notably at the Noranda, the Amulet and the Waite properties, and the assurance of railway and good road facilities, indicate great prosperity for this new mining region. The copper ore discoveries have been accompanied by finds of important deposits of gold and of zinc ores. The year 1926 will probably witness the erection of a smelter and possibly a milling plant, as well as the construction of a branch railway which will follow a line in proximity to the most important known deposits.

The outlook for increased copper production from Canadian deposits is thus very encouraging, and with copper at a reasonably high price one can look for-



Trail-Riding in the Canadian Rockies—Party setting out from Jasper park along one of the trails leading southward toward the Columbia ice-field

POPULARITY OF TRAIL-RIDING IN CANADIAN ROCKIES

(Continued from page 1)

Jasper have been the two principal outfitting points in the Rockies for expeditions in search of big game, exploration, or glorious adventure. The climax of interest in the Canadian Rockies has naturally lain just along the main line of the Continental Divide. Here the mountains reach their culmination both in altitude and the variety and complexity of their alpine features. From the 49th parallel to the Peace River pass the spinal ridge of the Rockies is a tangled confusion of snow-capped peaks, glaciers, and ice-fields. Year by year its complicated topography is being slowly unravelled, new regions mapped and new routes opened up. The work of the Interprovincial Boundary Commission during the last five years in particular has been of great value in opening up Canada's mountain playgrounds, and the information the Commission has made public will enable many others to follow the long wilderness trails. To many this is the great attraction of the Canadian Rockies. Other mountains may have their quaint chalets and villages but the pack-train, the tepee, the bed of balsam boughs are characteristic of the Canadian ranges. Where else is it possible for a man to travel weeks at a time, lost to civilization, yet without danger from savage tribes or beasts?

Formerly the difficulties and expense of fitting out an expedition placed the outlying regions beyond the reach of all but a few. Each year, however, as trail riding becomes more widely adopted and better organized larger numbers are enabled to go out into these more remote parts. The Trail Riders Association and the Alpine Club of Canada are doing

ward to a renewal of operations in The Pas mineral belt in northern Manitoba, where large deposits have been proven, and also feel confident that more intense prospecting and exploration throughout Canada will prove the existence of deposits as yet unsuspected.

*Prepared under the direction of Dr. Charles Camsell, Deputy Minister of Mines, by Mr. A. Buisson, Mines Branch, Ottawa, Canada.

very much to enable lovers of the out-of-doors to enjoy the less known places. Conducted parties now make some of the longer expeditions, particularly the overland journey between Banff and Jasper which occupies about 21 days.

This region lying between the two parks, and accessible from either, is unsurpassed in alpine interest. Although the highest peak of the Rockies, mount Robson, lies to the north of the Yellowhead pass the mountains reach their climax in the great section centering about the Columbia ice-field midway between the lines of the Canadian National and Canadian Pacific railways. The Columbia neve, the largest ice-field south of Alaska, covers 110 square miles, and is the parent of streams flowing to three oceans; by way of the Columbia to the Pacific, by the Athabasca to the Arctic and by the Saskatchewan to Hudson bay and thence to the Atlantic. It is surrounded by a galaxy of noble peaks including mount Columbia (the second highest summit in the range), The Twins, mount Bryce, mount Kitchener, and mount Athabasca, all of them snow-capped and sending down glaciers and splendid icefalls in a bewildering confusion. This is indeed the "heart of the Canadian Rockies" and it will no doubt be sought by increasing numbers year by year.

The Banff-Windermere highway extends through 104 miles of wonderful mountain scenery in Rocky Mountains and Kootenay National parks. Starting at Banff, the road follows the Lake Louise highway to Castle, where it branches to the left, ascending to and crossing the Vermilion pass. Passing Marble canyon it then descends into the valley, crosses the Kootenay and Vermilion rivers, rises to cross Sinclair summit, drops down past Radium Hot Springs through the Iron Gates and Sinclair canyon and winds out on to the floor of the Columbia valley, terminating at Invermere, where it joins the Provincial Highway.

Metallic mineral production in Canada during 1925, according to the Dominion Bureau of Statistics, had a total value of \$125,410,000 as compared with \$102,406,528 the previous year.

IMPORTANT GEODETIC SURVEY IS COMPLETED

Canadian and United States Services Close 1,860-Mile Circuit of Triangulation

Certain operations of the Geodetic Survey of Canada in the eastern provinces of the Dominion were brought to a successful termination last season by the completion of a circuit of 1,860 miles of triangulation. The circuit closed at the head of the bay of Fundy with a discrepancy in geographic position of only 42 feet, which, averaging as it does about one-quarter of an inch per mile, was considered highly satisfactory.

The circuit is composed of 1,300 miles of triangulation in Canada and 560 miles executed by the United States Coast and Geodetic Survey. The Canadian portion of this circuit commences at a point on the International Boundary south of Montreal. The triangulation "net" (so-called because it is made up of a series of triangles) follows the St. Lawrence river to Anticosti island, then southward around Gaspe peninsula, Chaleur bay, and the eastern coast of New Brunswick to the head of the bay of Fundy. At this point it meets the net previously carried along the bay of Fundy from a point on the International Boundary, near St. Andrews, New Brunswick.

The United States section starts from the same point on the Boundary south of Montreal, proceeds south to Albany, N.Y., then east and north through the New England States to St. Andrews, where as above stated it meets the Canadian net.

In this 1,860 miles the surveyors had to contend with unusual difficulties of transportation, high winds, and poor visibility, and with errors due to refraction and attraction, but nevertheless the work was completed with the total error referred to above. A discrepancy, even so small as this, is not allowed to remain, but is immediately adjusted throughout the circuit.

Some of the country through which this net runs had never been surveyed in detail, and some was surveyed many years ago, under less favourable circumstances than at present, and not only will the geodetic survey render it easier and more economical to make non-geodetic surveys in the previously unsurveyed portion, but it will also result in the older surveys being utilized to the best advantage by co-ordination with the new. Inasmuch, also, as this geodetic net provides the positions or framework by which the other services, topographical, geological, and hydrographic, control their surveying and mapping; its prime requisite is that it be accurate. That it has been proved adequate by the most stringent modern standards is, therefore, gratifying.

Of the seven great scenic parks under Dominion control in the Rockies and Selkirks, three are in Alberta and four in British Columbia. Waterton Lakes, Rocky Mountains, (Banff), and Jasper National parks are in Alberta and Yoho, Glacier, Kootenay, and Revelstoke National parks are in British Columbia.

Apples may be grown over a great part of Canada, so great in fact that if it were all planted the crop would be sufficient to supply the markets of the world. In point of flavour, high colouring, and long-keeping qualities, the Dominion produces the best grades and the demand for Canadian apples from other countries is steadily growing as they become better known.

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CANADA TO OBSERVE SAVE-THE-FOREST-WEEK, APRIL 18 TO 24



A fine spruce forest in northern Alberta—Before the fire.

STRONG COMMITTEE IN CHARGE OF CAMPAIGN

Leading Commercial, Industrial, and Social
Organizations Take Part in Save-
the-Forest-Week

The work of organizing and directing the 1926 campaign in connection with Save-the-Forest-Week in Canada is in the hands of a Central Standing Committee composed of representatives of leading organizations in the commercial, industrial and social life of the Dominion. This committee, which is appointed by the Honourable Charles Stewart, Minister of the Interior, has been charged with devising means of publicity and propaganda and correlating the work of the local committees appointed by the provinces. The appointment of a Central Standing Committee to carry on the 1926 campaign was largely as a result of the outstanding success achieved by this organization in connection with last year's Save-the-Forest-Week.

This year's committee is again headed by Mr. J. A. Gillies, Braeside, Ontario, Past President of the Canadian Forestry Association, who is this year the representative on the committee of the Canadian Lumbermen's Association. Mr. Clyde Leavitt, of the Board of Railway Commissioners is Vice-President, and Mr. D. Roy Cameron, of the Forest Service, Department of the Interior, is Secretary. The other members of the committee are:—

E. H. Finlayson, Forest Service, Dept. of the Interior.

J. B. Harkin, Canadian National Parks, Dept. of the Interior.

F. C. C. Lynch, Natural Resources Intelligence Service, Dept. of Interior.

Robson Black, Canadian Forestry Association.

A MESSAGE FROM THE MINISTER OF THE INTERIOR

May I appeal especially to those dwelling in communities in or adjacent to the forest; in other words to the people who know and use the forest in their daily life and work. Because of long familiarity with an apparently boundless extent of woodland, such persons may be prone to forget the enormous areas of our country where no forests occur and the necessity there is for care and wise use, not only that the needs of our own country may be met, but that we may benefit from the impending world-shortage in timber supplies. For every resident who is neighbour to the forest, for the fisherman who whips a forest stream, for the hunter who roams our woodland, for the woods worker, and above all for the settler who must use fire as a means to clear his homestead, I have this message—"Remember, what may appear to be useless to-day may become valuable to-morrow. The forest vies with the wheat field as the emblem of Canada's prosperity. Be not among those who 'cannot see the forest for the trees'".

The great menace to the forest is fire—or rather the criminally careless use of fire which, to our shame be it said, is the cause of 90 per cent of our forest fires in Canada to-day. The bandit, or outlaw, having committed a crime, seeks to make a get-away from the vicinity of his nefarious deed and to escape to distant parts of the country. Why? Not solely because he has transgressed the law, but because he has violated the peace and quiet of the public mind, and because he knows he will be delivered to justice by an outraged public opinion. Hence the bandit travels secretly by night, hiding in fields and hedgerows by day, in order that he may escape his just deserts.

In what respect does the fire outlaw—and in that category I place not only the malicious incendiary, who is rare indeed, but every careless or thoughtless person who allows fire to escape into the forest—in what respect, I say, does the fire outlaw differ from the ordinary bandit? In one way only—he robs not directly nor deliberately, but indirectly through carelessness or failure to realize the possibilities of his act. But he robs, and sometimes kills, just as surely as the other. He steals the job from the workman, the bread from the mouths of the workman's family, the raw material from the factory, the freight from the railways, the tourist attractions from the community, the revenue from the Government, and finally, he extracts from you and me the money required by the country in extra taxation to make up for all these losses.

Is there any fundamental difference in result between robbery by fire and robbery by violence? Why then, is the one countenanced by public indifference, whilst the other is denounced by public opinion? The reason is that the people of Canada, and especially those who, living in or near the forest should know better, still look upon a forest fire as a natural phenomenon, as an "act of God" if you will. We have not yet really analyzed the situation; we have not segregated cause from effect; we have not become thoroughly seized of the fact, as stated in the Royal Proclamation, "that in truth, not fire but the hand that lights it is the public enemy."

I repeat—90 per cent of the forest fires in Canada are caused by human agency. When these fires are regarded in the minds of the people as criminally wrong and entirely preventable, then and then only will they be eliminated from the forest. When the whole population is as determined to abolish robbery by fire as it is to abolish robbery by violence, then forest fires will be as few and far between as are these other outrages. Here then, in the development of a public consciousness that will demand strict accountability for carelessness with fire in the forest, lies the opportunity and duty of every citizen,—and to that duty and opportunity, Save-the-Forest-Week is a clarion call.

CHARLES STEWART,
Minister of the Interior.



View in the same forest—After the fire.

FOREST FIRE LOSSES DURING 1925 SEASON

Fire Hazard Increased in Intensity from Eastern Canada to Pacific Slope

According to statistics gathered by the Forestry Branch of the Department of the Interior, the general forest fire situation in Canada in 1925 was very similar to that of 1924 but with, in many cases, much heavier losses. With the exception of Ontario, the provinces east of the Lake of the Woods experienced the lowest annual fire losses so far recorded; in the Prairie Provinces—Manitoba, Saskatchewan, and Alberta—the losses were moderate, while west of the Rockies in British Columbia, the destruction by forest fires was the greatest known.

In 1923 it will be recalled, the fire situation in Canada was exactly the reverse of 1924 and 1925, with heavy losses in the east and practical immunity from fire in the west. These extremes clearly indicate the dominant influence of varying weather conditions in respect to our annual regional loss from forest fires. Certainly the progressive increase of the fire hazard and loss from east to west in 1925 closely reflected the peculiar weather conditions. Except for a part of August, weather conditions last summer in Eastern Canada were unfavourable for the start or spread of fires, through Ontario, Manitoba, and Saskatchewan to Alberta, the weather became drier and warmer, and in British Columbia the length of the period of high temperature and low humidity was phenomenal.

Although forest fire losses in Canada during 1925 were heavier than in the previous year, they were less than the

NORTHWESTERN QUEBEC MINING DEVELOPMENT*

Reaches Stage Where Discoveries Have
Been More or Less Thoroughly Tested

The year 1925 has seen an astonishingly rapid development of mining in Quebec. The discoveries of previous years have been developed and tested more or less thoroughly, and though many have fallen by the wayside, others have proved of unsuspected value. To this apparently sudden development many factors have contributed, chief of which is the improvement that has been made in transportation during the past two years. Roads have been cut to connect various parts of the area with the railroads to the north, south, and west. Although these roads are as yet fit only for winter use, still a sufficiency of the heavier supplies can be brought in at this season to carry on the work during the entire year. In addition more efficient motor boat and aeroplane services have been established, whereby the necessary supplies of more perishable goods and of men can be rapidly brought in to almost any part. Still further improvement in this regard will take place in the near future, as a railway is now under construction from O'Brien station on the Canadian National railway into Rouyn township.

The most spectacular development of the past year is the manner in which copper has taken the centre of the stage. Although the search for gold is still prosecuted as vigorously as ever, and by no means without favourable results, the copper discoveries have been so imposing that public attention has been focussed on them almost to the exclusion of the other. This was not so evident a year ago, as the first copper deposits found, on the Horne claims, contain enough gold to be ores even without the copper values; in the later discoveries, however, the amount of gold is small and copper the main constituent of value.

On the Horne property a force of about a hundred men has been employed, and work has proceeded rapidly. The property has been entirely cleared of bush, and suitable mine buildings erected. Plans for the erection of the first 500-ton unit of a smelter are well under way, and construction will begin as soon as the railway now building can bring in the necessary materials. Two shafts about a thousand feet apart have been put down, the deepest 328 feet, and the lateral workings have blocked out bodies of ore valued, according to the company's statements, at more than twenty million dollars.

About seven miles northwest of the Horne is the Waite-Montgomery, another property that seems likely to be of great value. The ore body was discovered in the spring of 1925, and during the summer was explored by surface trenching only. Drilling was commenced at the beginning of winter, but the results have not yet been made public. The ore is a solid mass of mixed sulphides of copper, iron, and zinc, and averages 17 per cent copper at the surface. It forms a flat sheet of thickness yet unknown.

The Amulet claims lie about two miles south of the Waite-Montgomery. A number of small bodies of copper ore

*Prepared under the direction of Dr. Charles Camsell, Deputy Minister of Mines, Ottawa, by Mr. H. C. Cooke, of the Geological Survey.

AERIAL MAPPING IN ALBERTA

Over 8,000 Square Miles of Agricultural, Forest, and Mineral Lands Successfully Photographed

One of the outstanding features of aerial photography is its wide field of application as an aid in the development of the natural resources of the country. This is indicated by the progress made in Alberta during the past year. In this province, using only one aeroplane, over 8,600 square miles of territory were successfully photographed. This area is equivalent to a strip of

previous season's experiments showed that, with the photographs available, the mapping work was so facilitated that the examiners could confine their attention almost entirely to the examination and interpretation of the soils and surface cover, thus greatly expediting the work, at the same time obtaining more reliable results.

The photographs showed in great



Aerial Mapping in Alberta—Royal Canadian Air Force plane engaged in photographic work over forested area. The light and dark patches indicate different timber types.

country ten miles wide extending from Winnipeg to Edmonton. The work was carried out from the High River air base by the Topographical Survey, Department of the Interior, in co-operation with the Royal Canadian Air Force, and consisted principally in obtaining vertical overlapping photographs from an elevation of slightly over two miles.

The major portion of the work done was in connection with land classification, forest investigation, and mapping surveys in the district between Edmonton and Athabasca covered by the Victoria sheet of the Sectional Map of Canada, and that covered by the Fort Assiniboine sheet to the west. The

detail all the features of the ground, the exact areas and boundaries of bush lands, swamps, sandy areas, the courses of rivers and streams with their innumerable windings and the roads and other features of importance. These photographs were mounted and assembled in book form for each township and on them were marked the boundaries of each quarter-section, or farm unit. The books were taken right into the field and the examiners made their notes on the photographs in proper position from ground study.

The party without the use of the photographs in previous years was able to examine and map on the average 600,000 acres each season. With the aid

have already been found on it, and the chances are that a discovery of importance may yet be made. A number of other discoveries of copper have also been reported since the writer's visit to the district in September, but no definite information as to their value is available.

The gold situation is of less outstanding promise. Although numerous discoveries were reported in 1923 and 1924, most of them on investigation have proved to be too small, too spotty, or too low in grade to be mined at a profit. The gold veins are of two general types: quartz veins carrying free gold, and replacement veins in which the country rock has been replaced by quartz, calcite, and auriferous sulphides. Although the quartz-free gold type has yielded many spectacular samples and discoveries, it has so far

failed to produce any deposits of real value, with the one possible exception of the veins on the property of the Malartic Mining Company in Fourniere township. These veins have stood up under surface examination, and are now being drilled by the Porcupine Gold-fields and Development Company. The replacement type of vein is found much more rarely, but when found is in general more likely to form a deposit of importance. Among those that have stood up under surface examination and are now being more fully investigated, are deposits on the F. S. Arntfield claims in Boischatel township and on the claims of the Malartic Mining Company previously mentioned; on the Francoeur claim in Boischatel township, and on the property of the Huronian Belt Mining Company in Rouyn township.

REMARKABLE RISE IN 1925 DAIRY EXPORTS

Heavier Shipments of Cheese and Butter Were Principal Factors in Increase

An increase of over 38 per cent in the value of exports of dairy produce from Canada in 1925 is reported by the Department of Agriculture. Last year's exports had a value of \$57,387,990, as compared with \$41,551,730 in 1924. This remarkable rise is due principally to the increase in shipments of cheese and butter, the value of cheese exported rising from \$22,375,787 in 1924 to \$34,575,980 last year and that of butter from \$22,343,939 to \$26,646,535. There was also a gain in the quantity and value of cream and fresh milk exported.

The following comparative table gives the quantities and values of exports of dairy products during the years 1924 and 1925:—

	1925	1924
Cream... gals.	4,077,487	3,288,822
\$ 7,000,141	5,328,446	
Milk, fresh... gals.	4,314,193	2,896,279
\$ 784,081	523,327	
Butter... pounds	26,646,535	22,343,939
\$ 9,917,516	8,000,512	
Cheese... cwt.	1,507,429	1,214,656
\$ 34,575,980	22,375,787	
Milk powder... cwt.	70,696	72,650
\$ 740,668	690,451	
Milk, cond... cwt.	406,140	402,506
\$ 4,347,773	4,628,913	
Casein... pounds	271,653	57,059
\$ 21,831	4,294	
Total value...	\$57,387,990	\$41,551,730

of the photographs this party completed 1,178,000 acres, or an increase of 96 per cent. Not only were the results more complete and more detailed, but the photographs are still available for rendering similar service to the geologist, forester and others interested in the development of the district.

Another operation of considerable importance was the photographing of the Saskatchewan River valley and adjacent country from west of Edmonton upstream to its junction with the Clearwater river. These photographs were required for the purpose of studying and correlating the coal seams of the district and making other geological investigations. The great assistance rendered to the geologist by these photographs has been reported by Dr. Allan of the University of Alberta under whose direction the investigations were being carried out.

The other work done in this province consisted principally of photographing the Buffalo Park at Wainwright. The purpose was to obtain at small expense and without undue expenditure of time, a map of the park for administrative purposes.

The success of these operations carried out in conjunction with the ground investigations gives promise of great assistance to geologists, examiners, foresters, and others connected with the development of the resources in enabling them to concentrate their energies on the investigations in hand, having at the same time a detailed and comprehensive view of the whole area under consideration. The elimination of the mapping, leaving only the interpretation and study, should greatly expedite the investigations.

A result which constitutes a record in aviation was achieved in connection with the above work. The officers of the Air Force were successful in photographing the entire district in parallel strips ninety miles long with very few gaps and no waste overlapping. This was done over territory, a large portion of which is in forest reserves hitherto unmapped.

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Minister
W. W. CORY, C.M.G.,
Deputy Minister

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OTTAWA, APRIL, 1926

The Royal Proclamation setting aside April 18 to 24 as Save-the-Forest-Week appeared in the March issue of this bulletin.

FOREST FIRE LOSSES DURING
1925 SEASON

(Continued from page 1)

average for the five-year period, 1920-1924. There were 5,490 forest fires in the Dominion last year, burning over an area of 1,913,066 acres, and causing a total loss of \$6,646,889. The following table gives the figures for the year in detail as compared with the averages for the five-year period 1920-1924:

	1925	Average 1920-1924
Total number of fires...	5,490	6,286
Total area burned (acres)...	1,913,066	3,066,951
Mature timber:		
Area burned (acres)...	300,015	722,191
Timber burned (M. bd. ft.)...	2,471,000	3,530,000
Est. Stumpage Value...	\$4,826,565	\$10,482,900
Young Growth:		
Area burned (acres)...	499,988	850,171
Estimated value...	\$1,118,700	\$2,378,338
Non-Forested:		
Area burned (acres)...	1,113,062	857,240
Property burned value....	\$ 701,624	\$ 1,031,462
Total gross damage...	\$6,646,889	\$13,891,800

REGIONAL CONDITIONS

Generally speaking Nova Scotia and New Brunswick were particularly fortunate as regards fire losses. In Nova Scotia the damage sustained was purely nominal and did not exceed \$15,000. In New Brunswick 103 fires were reported, and of these 60 per cent were extinguished before they reached five acres in size, while only three fires spread beyond 500 acres. A total of 2,937 acres of forested land was burned over and 2,936 acres of non-forested.

Owing in part to the good patrol service now established in Quebec, and also to the favourable weather conditions, only about 25,000 acres were reported burned over during last year. This area was about 10 per cent of that fire-swept in 1924 and less than one per cent of the 1923 figures.

Notwithstanding severe fire hazards west of lake Superior in early spring and north of lake Huron in the late summer, general weather conditions over the whole of Ontario were conducive to a limited fire loss. A total of 1,198 fires was reported, 73 per cent of which were put out before reaching 10 acres in size. A total area of 187,494 acres was fireswept, of which 65,784 acres was young growth and mature timber.

In the forested areas of Manitoba, Saskatchewan, and Alberta a some-

WATER-POWER AND OUR FORESTS

It is seldom that the exploitation of any great natural resource can be successfully accomplished without the use of a different resource. This latter may take the form of a raw material such, for instance, as coal, or it may be water-power, or even a waterway; that is, anything which directly or indirectly assists in the conversion of raw materials into manufactured products. Thus the development of natural resources is interwoven to the general advantage of the nation.

In Canada, excepting on the Pacific coast, the forest resources are exploited by means of the rivers and streams which float the logs to the point of utilization and by the water-powers on these rivers, which provide the power which is required in such large quantities to convert the raw wood into lumber, pulp, or paper. In other words the forest resources require the streams and water-powers but they in return provide a profitable utilization of these natural advantages.

Besides the direct relation between forest resources and water-power there is an indirect consequence which is of great advantage to water-power enterprise. The construction of a water-power plant involves a large capital outlay, the interest charges upon which must be met from the outset and any great delay in the growth of the power market will, by the accumulation of early deficits, jeopardize the ultimate success of the power enterprise. The pulp and paper industry provides an ideal market for water-power in that it requires a large block of power. The result is therefore, that if a hydro enterprise can secure an initial pulp-and-paper load it is assured of a steady income which will go a long way towards meeting the charges and afford opportunity for the power enterprise to build up its market in other directions. In this way the forest resources materially assist in the establishment of other industries which are attracted by the power facilities.

Water-power, generally speaking, is available continuously on a 24-hour a day basis and, where there are no water storage or pondage facilities, the power of the water must be utilized as it passes the site or it is lost. Thus a steady 24-hour load, such as is approxi-

what normal fire hazard prevailed. Of the 606 fires reported 60 per cent were extinguished before reaching 10 acres in size. The area burned over consisted of 65,000 acres of mature timber, 105,100 acres of young growth, and 200,348 acres of non-forested land, totalling 370,448 acres.

During 1925 British Columbia suffered the worst forest fires in her history. A total of 3,010 fires was reported from Federal and provincial lands, covering an area of 1,315,822 acres. This total is made up as follows: mature timber, 217,293 acres, carrying over one thousand million board feet of timber; 303,563 acres of very valuable young growth; and 794,966 acres of non-forested lands.

The outstanding feature was the abnormal number of lightning-caused fires, no fewer than 749 or 25 per cent of the total. However, in spite of the difficulty of reaching such fires, 69 per cent of them were suppressed in the incipient stage. About 800 fires were started by careless campers and smokers.

mated by a pulp and paper mill, is an ideal one. Again in the interval between the completion of the power development and the complete marketing of the power there is a power surplus which can frequently be sold very cheaply. The pulp and paper industry affords a market for this surplus power also, in that it has considerable process steam requirements. This steam can be raised in electric boilers using power that would otherwise go to waste, producing thereby cheap steam for the mill and additional revenue to the power station. It is not usually desirable to utilize any but surplus power for steam raising but fuel can be gradually substituted as the surplus becomes absorbed by other industries.

The double significance of forest resources in aiding and being aided by water-power development may not be generally recognized, but there are a number of industries and communities thriving upon water-power, the development of which was made possible, or at least materially aided, by the requirements of the pulp and paper industry. At the present time turbines of an aggregate capacity of 482,000 h.p. are installed in pulp and paper mills which purchase, in addition, a further 275,000 h.p. from existing stations. Thus upwards of three-quarters of a million horse-power, or nearly 18 per cent of the present water-power installation of the Dominion is devoted to the pulp and paper industry, all of which demonstrates how vital is the protection of our forest resources to the water-power industry.

STRONG COMMITTEE IN CHARGE
OF CAMPAIGN

(Continued from page 1)

A. E. Cadman, Canadian Pulp and Paper Association.

Col. R. F. Parkinson, Canadian Daily Newspapers Association.

Louis J. Ball, Canadian Weekly Newspapers Association.

W. F. Harrison, Canadian National Newspapers and Periodicals Association.

J. B. Stephenson, Pulp and Paper Magazine.

B. M. Winegar, Canadian Pacific Ry. Canadian National Railways.

A. G. Parker, Canadian Bankers Assn.

E. T. B. Pennefather, Dominion Mortgage and Investments Association.

Dan McLachlin, J. S. Gillies, Canadian Manufacturers' Association.

G. L. Morrissey, Canadian Fire Underwriters Association.

A. E. Corrigan, Canadian Life Insurance Officers Association.

P. M. Draper, Trades and Labour Congress of Canada.

N. B. Douglas, Retail Merchants Association of Canada.

C. G. Cowan, Association of Canadian Clubs.

Canadian Council of Agriculture.

A. C. Smith, International Gyro.

W. E. Houghton, International Kiwanis.

H. D. McCormick, 100 Club. Assn.

J. W. Arnott, International Lions.

W. Barron, Order of Hoo Hoo

Dr. J. W. Robertson, Boy Scouts.

The campaign for 1926 is being conducted along lines similar to those of last year, but enlarged and expanded. The newspaper publicity is being particularly directed towards the outlying communities in forested districts, where much the greater part of the fires originate, while speakers bureaux to

WHY APRIL CHOSEN FOR
SAVE-THE-FOREST-WEEK

His Excellency the Governor General has appointed, by Royal Proclamation, the days April 18 to 24 inclusive as Save-the-Forest-Week. Last year a week at about the same period was designated for this purpose. There was a loyal enthusiastic response to the proclamation and much good resulted from the work done.

Suggestions have been made that publicity directed towards forest fire prevention should not be confined to any one week but should be continuous. This is, of course, very true and the forest authorities throughout Canada have work organized on a year-long basis. Nevertheless the focusing of the public mind on the subject through concentration of all forces during a special week has also very important advantages, chief of which is that for a short period a high degree of intensity of publicity can be attained. The forest authorities and co-operating organizations have not the resources or facilities at their disposal to sustain such intensive effort over long periods of time. For these reasons a special Save-the-Forest-Week is considered advantageous.

The week chosen is selected in the month of April for two reasons. The first of these is that in a large part of Canada the period of highest fire hazard in the forest is the fortnight succeeding the disappearance of the snow from the woods. During the warm days, which come at this time, the sun beats down through leafless trees, and the dead leaves and twigs and the dried-out grass and herbage of the previous season's growth become tinder, in which the smallest spark may start a conflagration. In another fortnight new growth appears and the danger is over until dry weather brings other hazards later in the season.

The second reason is that April comes in the season in which people usually make their plans for holidaying in the woods, and a word, a suggestion or a warning now will bear good fruit during the whole danger period. The fact that this year the United States authorities have selected the same week as Canada shows that it is generally agreed that the selection of a week in the month of April may be expected to produce the best results.

serve the various clubs and other organizations desiring addresses on forest fire prevention and for radio broadcasting are being used intensively. The work among the children in the schools is another avenue that is being followed up. A special program of exercises to be carried out by the children under the supervision of the teacher during Save-the-Forest-Week has been printed and distributed to the schools through the co-operation of the provincial committees.

The work of the Central Standing Committee during the weeks of preparation has been carried on with an intensity of purpose which only a great national problem can arouse. Those engaged in furthering the movement realize to the full the vast importance of protecting Canada's rapidly disappearing forest heritage and it is with a view to awakening in the public mind a similar realization of the tremendous annual wastage through forest fires that the Save-the-Forest-Week campaign is being carried on so as to touch all parts of the community.



Air Board photo.
Ontario's Tourist Resources—Aerial view of the heart of Ottawa showing the Parliament Buildings, also the Ottawa river, with the outskirts of Hull, Quebec, on the farther shore. The Rideau river is seen flowing into the Ottawa from the right, and just beyond this are the woods surrounding Rideau Hall, the residence of the Governor General.



Ontario's Tourist Resources—View of Niagara falls looking toward the Canadian or Horseshoe fall. A comparison of the size of the steamer, "Maid of the Mist", with her surroundings, gives an idea of the great height of the cataract. A portion of Victoria Niagara Falls park is seen in the background.

TOURIST RESOURCES OF ONTARIO

Highly Developed Areas and Great Untamed Hinterland Make Canada's Central Province Mecca of Visitors

With a domain extending a thousand miles from south to north and twelve hundred from east to west, Ontario, Canada's most populous province, presents unrivalled attractions to all tourists, and especially to those who in any line—hunting, fishing, canoeing, or motoring, or in quest of health, recreation and adventure in an inspiring environment—seek for new and virgin fields to conquer.

Of Canada's nine provinces extending from the Atlantic to the Pacific, Ontario is the central one, with four sisters on each side. She stretches out one hand to Quebec on the east and the other to prairie Manitoba on the west; her south door is on that mighty inland waterway, the Great Lakes, and her north threshold is the shore of Hudson bay. Between these boundaries what a wealth of resource, industry, art, history, sport, and adventure! Southern Ontario is the most thickly populated and highly developed section of the Dominion. The Niagara district is noted for its peach orchards and vineyards, the western peninsula and the counties along lake Ontario, the St. Lawrence, and the lower Ottawa, are fertile mixed farming and fruit growing areas, traversed by good roads and dotted with comfortable and artistic homes. In this belt are located most of the chief cities and towns with the industries, seats of learning, art galleries, and other institutions of modern life. This farming area extends northwards to the "highlands", one of nature's playgrounds, which contains such far-famed districts as Kawartha lakes, Georgian bay, Muskoka, Algonquin park and Nipissing. North and west of lake Nipissing lies the great hinterland of New Ontario, so-called to distinguish it from the older portion to the southeast. In the Laurentian ridge which runs along the whole southern edge of this region from east to west occur the rich deposits of gold, silver, nickel, cobalt,

copper and other minerals now in process of rapid development. North of this again is the famous Clay Belt, which pioneers are turning into an agricultural region, and beyond this are the largely unexplored lands reaching to Hudson bay and to the western boundaries of the province—the home of the Indian trapper and the fur trader. Forests of pine, spruce and other trees extend from the southern border of the highlands to the extreme north and west and the whole country is dotted and intersected with innumerable lakes and rivers.

Why Ontario is the Mecca of an annually increasing throng of tourists is explained by a glance at the map. The Great Lakes bend down into the United States in the form of a broad triangle the south apex of which is in the same latitude as southern New York and Connecticut. The territory within the triangle is southern Ontario. Of the 3,980 miles of International Boundary, from the Atlantic to the Pacific, Ontario faces the United States along 1,714 miles, and is an across-the-street neighbour to six great states; New York, Pennsylvania, Ohio, Michigan, Wisconsin, and Minnesota—states which contain more than one-third the total population of the republic.

The shortest distance from Michigan, and other northwestern states, to New York and New England is through southern Ontario. Twenty-five million people who travel in automobiles live within a twenty-four-hour ride of the boundary of the province—and from the returns of cars entering Ontario in the last three years it is evident that some hundreds of thousands already know the way. The Government of Ontario is pursuing a vigorous policy of road building, with the result that provincial highways and municipal motor roads extend all over the older part of the province from

the Quebec boundary to the Detroit river. In addition trunk highways stretch out northward to the Upper Ottawa, to lake Nipissing, to Georgian bay, and along the north shore of lake Huron to Sault Ste. Marie. West and north of that point the improved sections are not yet linked up but the work is proceeding. The palatial steamers of the Great Lakes are too well known to need mention, tourists travel to and through Ontario by yacht and motor boat and canoe. Owing to the innumerable lakes and rivers canoeing especially, has an immense vogue and is steadily gaining in favour. The older parts of the province are covered with a railway network chiefly of the lines of the Canadian National and Canadian Pacific, while their transcontinental lines pass through the mineral and timber belts of New Ontario.

Ontario shares with Quebec the same historic background and has in the remains of Fort Frontenac (Kingston), Fort Rouillé (Toronto), Lake Erie Cross (Port Dover), and many others, monuments which recall the lordly governors and intrepid explorers of the old regime, like Frontenac and Dollier and Galinée; and, in the ruins of the two Christian missions on lake Huron and in the fine monument at Orillia possesses memorials of the Jesuit martyrs and of the great Champlain himself. Of later date are Fort Henry at Kingston, Fort George at Niagara, and Brock's noble monument, magnificently placed on Queenston Heights. Many scarcely less famous buildings and monuments are scattered throughout the older parts of the province and these are being preserved and made accessible by the work of the Department of the Interior.

Ontario has the unique distinction of having within her borders two seats of government, Toronto the capital of the Province and Ottawa the capital of the Dominion, the latter city being the place of residence of the Governor General, the official representative of the British Crown. The student and the sight-seer have thus an opportunity of studying the federal and provincial forms of parliamentary government, and of viewing the stately architecture of the public buildings.

The province is famous for its hunting and fishing, not only on

account of the immense extent of virgin territory but also because of the great supply of game, due to well enforced game laws. The provincial and national parks, like Algonquin park in the east, Quetico park in the west, and Point Pelee park in the extreme south, are game sanctuaries, which not only give the tourist an opportunity of studying wild life at close hand but have also proved to be reservoirs, from which the surrounding areas are replenished with game. In the north woods moose and deer are plentiful and bear are common; duck and partridge are found all over the province, and snipe and woodcock in some parts; while in the streams and lakes the finny beauties most prized are black bass, trout and muskallonge. Hunting is permitted during open seasons on the payment of a license fee, and outside of sanctuaries the visitor is free to hunt practically anywhere.

Among scores of attractive places only a few can be mentioned. Niagara falls, one of the scenic wonders of the world, lake Simcoe, the Thousand Islands of the St. Lawrence, and the Rideau lakes, are all in southern Ontario, then come the highland areas, already noted, and lastly there are the great expanses of New Ontario, of which the very names—Temiskaming, Temagami, Manitoulin, lake Superior shore, Nipigon, Thunder bay, lake of the Woods—cry aloud of great spaces and inland seas; of forests and big game, of gold and silver, of unharvested rivers and unknown lakes; of a land of glorious possibilities where the adventurous can get behind the beyond and conquer the unconquered.

Information covering all features of touring in Ontario will be furnished upon application to the Department of the Interior, Ottawa.

According to explorers of the Topographical Survey, of the Department of the Interior, the predominant note of the northern woodlands of Canada, on the latitude of Great Slave lake, is that of the white-throated sparrow; while the plains to the north of this wooded area are always associated with the plaintive song of the Lapland longspur. This friendly little bird is always about camp and follows the traveller on his journey.

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HOME CONDITIONS AMONG INDIANS MUCH IMPROVED*

INDICATE ADVANCEMENT
AND GROWING PROSPERITY

Better Homes and New Attitude Toward
Education and Hygiene on Western
Canada Reserves

The Indians of the Prairie Provinces of Canada, all things considered, have been remarkably successful in their efforts at farming and stock raising. Recent reports from officials of the Department of Indian Affairs indicate the rapid progress made by these wards of the Government in fitting themselves to meet the new conditions of life amid which they are placed. Their material advancement and prosperity is probably in no way more markedly reflected than in the better home conditions apparent on every hand in the reserves in Manitoba, Saskatchewan, and Alberta. The housing conditions are so greatly improved that they compare favourably with those of the newer white settlers, while the change in attitude toward education and hygiene is a cause of satisfaction to government officials.

Probably the improvement in the dwellings of the Indians has been the most rapid of any of the changes in the home and social life of the Indians. The teepee, which during the earlier development gave way to the log shack, has now almost entirely disappeared and practically is now only used for seasonal hunting trips. The log cabin is now being rapidly replaced by dwellings of lumber, lath and plaster, and although some log cabins are still being built they are being finished with shingled roofs and lumber gables. The newer types of homes are substantial and commodious, with two or three bedrooms, a kitchen, a dining room, and a living room. These houses are well furnished and well kept, showing by their tidy and sanitary appearance the results of the frequent visits of the travelling nurses. The barnyards of these farms also bear evidences of the change which is taking place. Poultry, pigs, cows, and sometimes sheep are kept, indicating that the Indians now see the advantage derived from this side of farming.

Continued on page 4

*Prepared under the direction of Dr. Duncan C. Scott, Deputy Superintendent General of Indian Affairs, Canada, by Mr. W. M. Graham, Indian Commissioner.

THE WEST, A NEW TOURIST LAND

Canada's Great Open Spaces Beckon to Motorists—Unique
Road System on Prairies

The mental picture of the Canadian West is a vision splendid. Were an onlooker to view the scene from above Winnipeg, the eastern gateway of the prairies, and have his range of vision sufficiently extended he would see spread out to the westward a vast, gently rolling, fertile plain, gradually rising to the foot-hills of the Rocky mountains, over nine hundred miles

ducer; the prairies and foot-hills contain about 15 per cent of the world's coal reserves; the southwest corner is the ranching country; the forest belt north of the park lands is the chief seat of the lumbering industry, and the home of the fur-bearers; the Laurentian range across the northeast is now the scene of metalliferous mining development; and from the great rivers and



The West, A New Tourist Land—A view along the mighty Saskatchewan which runs through all three Prairie Provinces.

away. On the right, the northern edge of the prairies merges into a transition zone of mixed prairie and woodland, commonly called the park belt, and north of this, and stretching away indefinitely, is a belt of forest land, interspersed with lakes and waterways. In the extreme southwestern corner near the Rockies appears a stretch of ranching country. Fed by the melting snows and glaciers of the Rocky mountains the majestic Saskatchewan drains the whole plain and pours its tawny waters into the inland sea of lake Winnipeg to be thence discharged through the Nelson river into Hudson bay. Through the prairie belt extend three transcontinental railway lines with innumerable branch lines crisscrossing in every direction and stretching out into the north country.

The most striking feature of the landscape viewed from above is the vast checkerboard effect produced by the system of surveys which divides the whole country into blocks one mile square, by roadways running due east-west and north-south. In these provinces the Dominion of Canada has the greatest continuous area in the world laid out in astronomically based subdivision surveys.

Dealing with the territory by and large: the prairie is the great wheat pro-

vinces come the whitefish and sturgeon which supply the tables of half the continent.

The prairies which in fifty years have advanced from A Great Lone Land to be the Empire's granary, wherein the production of all kinds of grain has attained to the total of almost one thousand million bushels per year, are naturally the centre of interest. In this area which has a population of over two millions are located the capitals of the three provinces and other centres of distribution and manufacturing, the rapid rise of which has been the romance of the past twenty-five years.

The view that presents itself to a visitor on a summer afternoon as he halts his motor car on the top of some gentle rise anywhere in the prairies, is that of a vast, rippling sea of grain and grass, spread out on every hand as far as the eye can reach and appearing, to quote Bryant's words,

"As if the ocean, in his gentlest swell,
Stood still with all his rounded
billows fixed,
And motionless forever."

Everywhere there are evidences of fertility. The grain, largely wheat,

Continued on page 2

ACCESSIBILITY OF CANADIAN ROCKIES TO THE MOTORIST

GOOD ROADS PENETRATE
AT MANY POINTS

Wealth of Scenic Grandeur in Virgin
Territory Now Open to Motor
Tourists

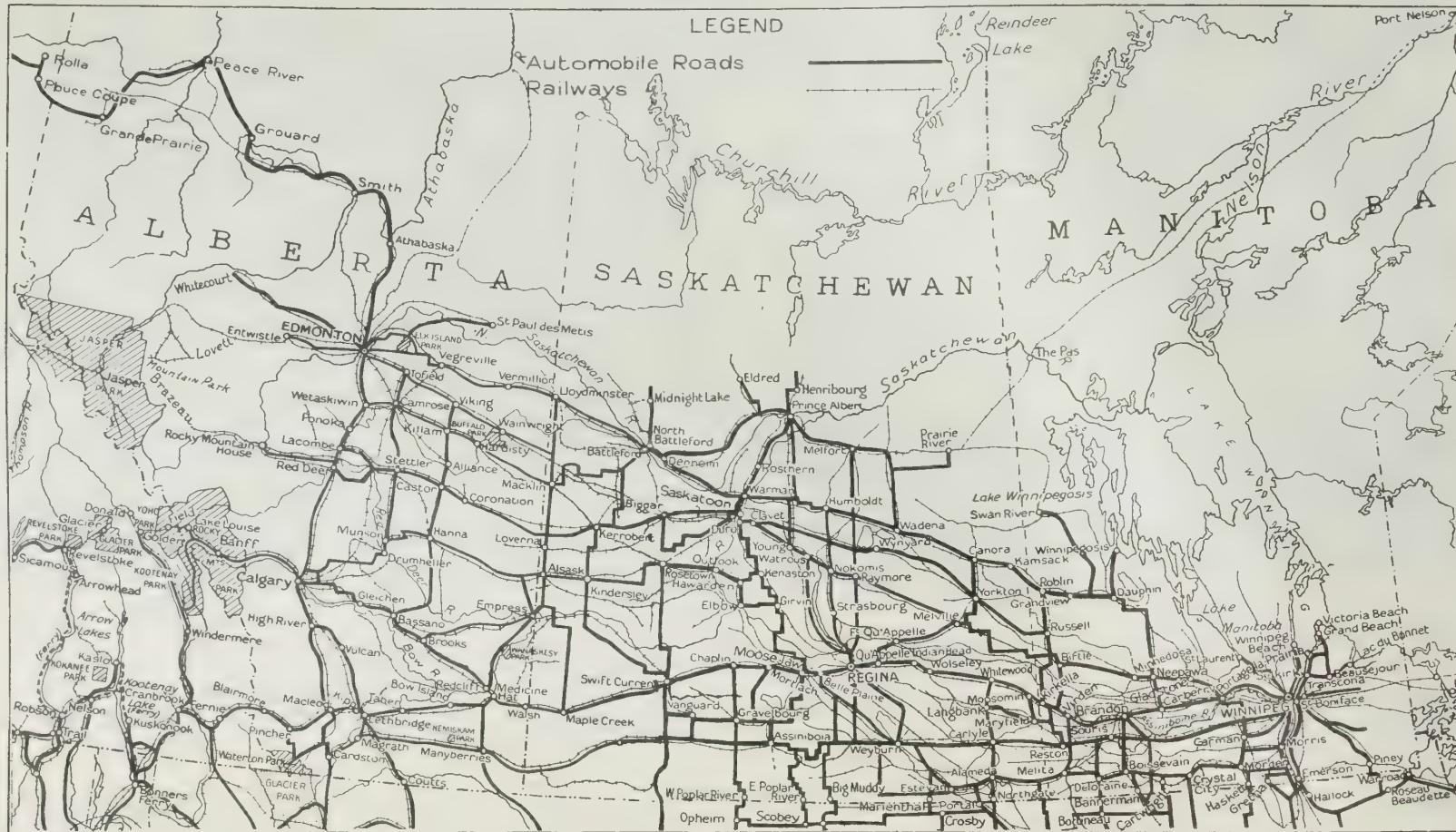
The motor car has probably done more than any other single mechanical invention to open up the undeveloped portions of the world. Year by year it is steadily finding its way into the most remote and inaccessible places. Before its insistent demand many closed doors have opened and a way to practically every beautiful and interesting place in the world is gradually being found.

Among other majestic regions into which motorists have been finding their way of recent years is the Canadian Rockies. Fifteen years ago the central ranges with their beautiful national parks were a closed land to this form of travel. The steel lines of the railways had carved and burrowed their way through the tangled chaos of giant peaks, but beyond these there were only the primitive trails of the Indian and pioneer. It was inevitable that a transmontane highway which would give access to the wonders of the parks and establish communication by motor road between the east and the west, should be one of the first projects to stir the minds of imaginative men in the western half of the Dominion.

As long ago as 1911 surveys had been made for a road from Calgary to Banff, traversing the Banff National park and then across the Vermilion pass to the Columbia valley. The Alberta Government undertook to build the section from Calgary to the park, the Dominion Government the park section and the province of British Columbia the western end. By 1914 the two eastern sections were opened for traffic and part of the work on the British Columbia section completed. The outbreak of the great war, however, put an end for several years to the continuation of operations. At its close the project was again taken up and by 1923 the new road, known as the Calgary-Banff-Windermere Highway was completed.

The importance of this road lay in the fact that it not only gave access to the great Banff park and afforded a way across the central ranges of unsurpassed scenic interest, but that it linked up at both the eastern and west-

Continued on page 4



The West, A New Tourist Land—Map of a portion of the three Prairie Provinces showing the network of main motor highways and railways which covers this area.

THE WEST, A NEW TOURIST LAND

Continued from page 1

stands fence high, and is seconded in this respect by the lush prairie grass. The latter is prinked out by the sprinkles and splashes of red and yellow, pink and purple of the prairie roses, the lilies, the vetches and the countless other flowers and blooms, which are at once the joy of the botanist and of the simple lover of nature.

The attention of the onlooker is drawn to the all-embracing road system, not by a sight of the roads themselves, for they are, for the most part, so hidden by the tall verdure that the whole country appears to be an unbroken wheatfield, but because of the constant passing to and fro across the landscape of heavily laden farm wagons and of a countless number of motor vehicles of every description. Automobiles are indeed everywhere, for it is not inapt to say that the West appears to have been created for the automobile and the automobile invented for the West. The advantages of this checkerboard road system, which has done so much to assist in the rapid development of the country, are at once appreciated by the visitor, for a glance at a map or a short run along any highway shows him that in whatever direction he desires to travel he can do so as readily as he can take his way about the streets of his own home town. He sees that if he proceeds, say west, he will within a mile come to a road running north and south, and that travelling on this road in either direction for a mile he will reach another cross-road parallel to the first. He need not ask questions. He simply starts his car, makes the necessary turnings and reaches his destination. It is almost impossible to lose oneself.

In the ranching areas, like those in the southwest, there are districts where there may be no roads or trails running in the direction the traveller desires to take. It is of no consequence, for everywhere there is the gently rolling expanse of firm, tough sod, and the motorist simply sights his objective and makes a bee-line for it across the prairie.

The observer cannot fail to notice throughout the wheat country the many comfortable, commodious, and often beautiful farm homes, the villages marked out by the tall and conspicuous grain elevators, and the railway trains speeding along in every direction. As the afternoon advances he will observe a greatly increased number of automobiles on the highways. People from the farms are evidently calling on their friends in the towns, while many townsmen and their families are enjoying the fresh scenes of the countryside. The visitor imagines that it is possibly a half holiday in the district, and it is not until he has witnessed a magnificent prairie sunset and noted that the light is beginning to fail that he looks at his watch and sees the lateness of the hour. Then he realizes that there has not been a special holiday but that the people in town and country have been enjoying themselves after the labours of the day, in the long hours of sunlight which permit the reading of a newspaper in the open until nearly 10 p.m. The many hours of health-giving sunlight, the clear, bracing air, full of ozone, and the countless opportunities to get close to nature render a holiday in the West the greatest of health builders, and many a man who is strong and useful to-day has to thank his stars that when ill and broken down his steps were directed to the prairies.

The Prairie Provinces are famous for their big game which is abundant because of natural conditions, protective laws, and the overflow from the sanctuaries and national parks. The big game animals which may be hunted in season are moose, deer, caribou, and bear, and in Alberta, Rocky Mountain goat and sheep. The prairies are the great breeding place of the continent for all kinds of wild fowl. Geese, ducks, snipe, grouse, prairie chicken, and partridge may be hunted in the open season in all the provinces. There is good sport fishing in the thousands of lakes and streams for a dozen species, including bass, tullibee, pickerel, pike, goldeye, and several varieties of trout. The hunting of buffalo, elk and antelope is prohibited in all the provinces, but it is

one of the sights of a lifetime to visit the enclosures, as big as a township or a small county, where these animals are thriving and increasing in numbers under natural conditions. This is particularly true of Buffalo National Park at Wainwright, where there are at present between six thousand and eight thousand buffaloes.

The tourist has before him one of the most fascinating lands imaginable. Whether he desires to travel by train or steamboat, automobile or canoe, whether his tastes incline to palatial hotels, bungalow camps, or tents, he will find ample satisfaction for every wish. Hunting, fishing, and visiting mining camps are all easily compassed; should he be a canoeist he can drop his craft into the Saskatchewan or the Assiniboine and paddle over old fur-trader routes even to Hudson bay; or if he seeks a new thrill he can travel in commodious modern steamers down the Mackenzie river system to the land of the midnight sun and the Arctic ocean.

Where every section has its tourist areas it is possible to mention only a few. In the east there are those about the three big lakes, Winnipeg, Manitoba, and Winnipegoside; in the north is the rugged forest country, full of big lakes and rivers, the Mecca of the hunter and fisherman; the Saskatchewan valley is shared by all the provinces; the famous Qu'Appelle valley is in the centre; and along the western edge are the Rocky mountains and foot-hills. On this slope of the Rockies are the largest of Canada's national parks, Jasper park in the north, Banff park in the centre, and Waterton Lakes park in the extreme south. All these recreation centres have their appeal and not least these mighty mountains, with their forest-lined valleys, their upland gardens, their glaciers and snow-fields, and their uncounted peaks, many of whose summits have never yet been scaled by man and which invite conquest by the energetic and the adventurous.

Information covering all features of touring in the Prairie Provinces will be furnished upon application to the Department of the Interior, Ottawa.

A VISION OF THE WEST

I can see the farmers seeding
By the brown Assiniboine,
And a-turning prairie gumbo
Into heaps of shining coin.
In the foot-hills of the Rockies
I can see the steers at rest,
And that's why, now I'm an exile,
I am pining for the West.
Where the sparkling sunbeams glance
All across the wide expanse,
And the ozone in the breezes
Makes your pulses throb and dance.

I can see the smacks, a-fishing
On lake Winnipeg so wide,
And the lumber steamers, loading
By the humming saw-mill's side,
I can see the silent Redmen.
As they row the livelong day,
In the big, fur-laden York boats,
On the route to Hudson bay.
I can see the miners, cleaving
Dusky seam and golden vein;
While the Springtime spreads her lilies
Like a garment o'er the plain.

Put me west of old Fort Garry,
Where the prairie roses bloom,
Where the auto laughs at distance
And a man has elbow room.
Let me ride upon the pilot,
When the first through train goes out,
Let me hear the settlers welcome it
With joyous ringing shout.
Let me be upon the prairie
When they start a baby town,
And they're living under canaves
While the first mud-sills go down;
For it truly stirs the blood
To see cities in the bud,
And to feel a nation growing
From the fertile prairie mud.

—J. L.

Sales of asbestos increased during the year 1925, according to the Dominion Bureau of Statistics so that the total for that commodity rose about 35,000 tons to 260,000 tons valued at \$8,700,000, an increase of \$1,990,000 above the sales in the preceding year.

Canada's output of structural materials and clay products during 1925 is reported by the Dominion Bureau of Statistics as having a value of \$228,440,000, being an increase of \$18,856,594 over 1924.

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OTTAWA, MAY, 1926

GROWING IMPORTANCE OF WILD LIFE PROTECTION

Large and Representative Gathering Discusses Canada's Problems at Game Conference

The growing importance attached to wild life conservation in Canada was strikingly evidenced by the large and representative gathering of provincial and federal officials and others at the game conference convoked by Honourable Charles Stewart, Minister of the Interior, in Ottawa, April 13-15. Each province of the Dominion sent its principal game officers; ten departments of the Federal Government interested in game conservation and the enforcement of game regulations were represented; and the two national railways and the National Council of Women had delegates in attendance. It is clear that the value of Canada's game as a natural resource is being realized and its place in the economic life of the country recognized. Fur bearing animals have, from the earliest times, contributed in a large way to the trade and exports of the country, and in recent years Canada's leading position in game conservation has served to draw to her, each succeeding season, increasing numbers of tourists and sportsmen from other countries.

Honourable Charles Stewart opened the conference and extended a welcome to the delegates on behalf of the Dominion Government. He expressed himself as being greatly interested in the conservation of wild life in Canada, and pointed out the problems which arise owing to the division of jurisdiction between the provincial and federal authorities. He commended the idea of joint conferences, such as the one being opened, as being the only effective means of smoothing out difficulties and getting the best results, both from the provincial and the national standpoint.

At the conclusion of Mr. Stewart's address the conference organized for business and Mr. Arthur Gibson, Dominion Entomologist, Department of Agriculture, was again selected as chairman and Mr. Hoyes Lloyd, Supervisor of Wild Life, of the Canadian National Parks, Department of the Interior, as secretary.

During the three days of morning and afternoon sessions the many problems of wild life conservation in Canada were reviewed and in the eight



Wonderful Cataracts in Canadian North—View of Alexandra falls on the Hay river in the Northwest Territories. The water pours over a ledge 109 feet high.

resolutions adopted the results of the work of the conference are indicated.

Two of the resolutions deal with the export of game trophies and recommend change in the Customs regulations to govern the same. In order to expedite the passage of lawfully taken game trophies through the Customs at the border it is suggested that big game hunters be allowed to make the required declarations before any Customs officer, instead of before only the Collector of Customs in person. The other change recommended deals with the export of deer hides. The resolution asks that deer hides taken under the game laws of the respective provinces and the export of which is sanctioned by the province, shall be exportable during the period of open season and for three weeks thereafter.

Two other resolutions request the Federal Government to secure data in the interest of wild life conservation. One of these recommends that certain biological and economic investigations bearing on present day conservation be undertaken, while the other asks the launching of an immediate inquiry into the cause of the death of thousands of waterfowl in certain sections of western Canada.

Changes in the regulations governing the seasonal protection of game birds in Canada were recommended in three resolutions adopted. A close season throughout the Dominion for black-bellied and golden plover for a period of at least three years, because of the great decrease in the number of these game birds; a continuation of the close season on eider duck until January 31, 1927 (the Yukon and Northwest Territories, and that part of Ontario north of the Quebec-Cochrane-Winnipeg line of the Canadian National Railways being excepted); and an amendment to the Migratory Birds regulations changing the seasons for yellowlegs in the Maritime Provinces to the following: In Prince Edward Island, September 1 to November 30; and in Nova Scotia and New Brunswick, September 15 to November 30.

An active and persistent campaign to reduce the number of crows was recommended in another resolution. The crow was condemned as one of the most destructive factors in respect of game and general bird life.

Those attending the conference were:

Provincial Representatives

Prince Edward Island—Hon. J. W. Myers, Minister of Agriculture.
Nova Scotia—F. A. Harrison, Acting Deputy Minister, Department of Lands and Forests.

New Brunswick—L. A. Gagnon, Chief Game Warden.

Quebec—J. A. Bellisle, Superintendent of Game and Fisheries; I. Heckst, Game Inspector, Montreal; Dr. J. W. DeLisle, Game Officer, Hull; James Quinn, Game Warden, Campbell's Bay.

Ontario—G. Rapsey, Department of Game and Fisheries; J. W. Coffey, Department of Game and Fisheries; G. S. Leach, Game Warden, Ottawa.

Manitoba—J. H. Evans, Deputy Minister of Agriculture.

Saskatchewan—F. Bradshaw, Game Commissioner.

Alberta—B. Lawton, Game Commissioner.

British Columbia—M. B. Jackson, Chairman, Game Conservation Board. Canadian National Railways—C. K. Howard, General Tourist Agent; E. G. Poole, Fish and Game Inspector. Canadian Pacific Railway—A. O. Seymour, General Tourist Agent.

National Council of Women—Mrs. J. A. Wilson and Mrs. R. H. Knight.

Federal Representatives

Department of the Interior, Canadian National Parks—J. B. Harkin, Commissioner; Hoyes Lloyd, Supervisor of Wild Life; R. W. Tufts, Chief Migratory Bird Officer, Maritime Provinces; H. F. Lewis, Chief Migratory Bird Officer, Ontario and Quebec; J. W. Munro, Chief Migratory Bird Officer, Western Provinces; C. E. Nagle, J. Corcoran, and G. H. E. Powell.

Forestry Branch—E. H. Finlayson, Director; F. H. Byshe.

Natural Resources Intelligence Branch—T. A. Brown and J. O'Keefe.

North West Territories and Yukon Branch—O. S. Finnie, Director; Maxwell Graham, Chief, Wild Life Division.

Department of Agriculture—Arthur Gibson, Dominion Entomologist; Norman Criddle, and H. G. Crawford, Entomological Branch; F. G. Elford, Dominion Poultry Husbandman; Dr. C. H. Weaver and G. Robertson, Poultry Division.

Department of Customs—E. L. Sanders.

Department of Indian Affairs—T. R. MacInnes.

Department of Marine and Fisheries—Prof. E. E. Prince, Biological Board of Canada; J. A. Rodd, Superintendent of Fish Culture.

Department of Mines—Dr. W. H. Collins, Geological Survey; Dr. R. M. Anderson, Chief, Division of Biology; P. Taverner, Ornithologist, Victoria Museum, Ottawa.

Dominion Board of Railway Commissioners—Clyde Leavitt, Chief Fire Inspector.

Dominion Bureau of Statistics—Miss F. H. Brown, Fisheries and Furs Division.

Post Office Department—G. H. Whillans. Royal Canadian Mounted Police—Col. C. Starnes, Commissioner.

WONDERFUL CATARACTS IN CANADIAN NORTH

Alexandra and Louise Falls in Northwest Territories Are of Great Beauty

Hidden within the recesses of Canada's north country, less than fifty miles from the important trading post and mission station of Hay River on Great Slave lake but sufficiently off the regular routes of travel to have been visited by only a mere handful of white men, are two of the most wonderful cataracts in the Dominion. These are the Alexandra falls and the Louise falls, situated within about a mile of each other on the Hay river.

During the course of surveys carried on last summer along the Hay river for the Department of the Interior, a Topographical Survey party spent several days in the immediate vicinity of the falls. The members of the party were greatly impressed by the scene, and the surveyor in charge reports that it is scarcely possible to use language too extravagant in describing the majesty of the setting of Alexandra falls or the sheer beauty of Louise falls. In the case of the former the river comes around a bend half a mile above Alexandra falls, racing in a tumult of swift water and foam, to pour over a sheer precipice 109 feet high into a shadowy chasm with a thundering force that makes the earth quiver. Clouds of spray rise to the canyon's rim, where the sun adds to the glory of the whole by forming rainbows in the mist. Along the cliff edges are dense and thrifty stands of spruce and poplar, their colours kept fresh by the flying spray. The Alexandra falls are not in themselves the sole item of beauty here, though splendid views may be obtained from several points. It is in the drop of the entire river that one is most impressed with a sense of unlimited majesty and power.

The river, after flowing a mile through the canyon, comes to a second break and drops fifty feet, this time forming Louise falls. When one approaches up the beach of the lower gorge and rounds the point, the Louise falls may be seen to best advantage. Between the high walls of darkly wooded cliffs is a bit of fairyland, a band of silver pouring out of the darkness into light.

These falls were discovered by Dr. W. C. Bompas, Anglican Bishop of Mackenzie River, in 1872 when on a trip down Hay river, and were named by him Alexandra and Louise respectively, after the late Queen Alexandra and the Princess Louise.

The value of the fisheries production of Prince Edward Island in 1925 was \$1,598,119, compared with \$1,201,772 in 1924, according to the Dominion Bureau of Statistics. These totals represent the value of the product as marketed. The principal kinds of fish, viz., lobsters, cod, smelts and herring show increases in quantity of catch and in marketed value. The catch of lobsters exceeded that of the preceding year by 12,677 cwt., while the marketed value of the product showed an increase of \$311,411. The pack of lobsters in 1925 comprised 34,121 cases, valued at \$958,492, compared with 26,814 cases, valued at \$681,575 in 1924. The marketed value of cod taken in 1925 was \$150,135; of smelts, \$142,496; and of herring, \$67,041.

ERECT NEW PLANT IN TURNER VALLEY FIELD

Extensive Works to Handle Products of the Famous Royalite No. 4 Oil Well

A total expenditure of approximately \$660,000 was made during the latter part of 1925 in the Turner Valley oil-field of Alberta in order that the product of the famous Royalite No. 4 well, located about thirty-five miles southwest of Calgary, might be efficiently handled and the waste of one of Canada's natural resources effectively prevented.

Attention has already been drawn to this well, which has a daily flow of 18,000,000 cubic feet of natural gas which yielded, during 1925, approximately 186,000 barrels of crude naphtha, of specific gravity 73 degrees, Baume. After separation the naphtha is pumped to the refinery at Calgary through an oil line recently completed at a cost in the neighbourhood of \$160,000. Here it is treated to eliminate the hydrogen sulphide, the presence of which would render both the liquid and the gas unpleasant and even dangerous to handle. The naphtha is largely used for blending with lower grade crude oils.

The gas is also piped to Calgary for heating and other domestic purposes and it is to extract the hydrogen sulphide from it that the Royalite Oil Company has at a cost of \$250,000 erected a "scrubbing" plant on a site about one mile from the well.

A flow line connects the well head with the separators, which remove the crude naphtha. When the gas enters these lines it is at a temperature of 22 degrees below zero owing to the tremendous expansion, and in order to raise the temperature of the gas above freezing point heaters are used along the lines leading to the scrubbing plant. At the "scrubbers" the hydrogen sulphide is removed and the gas then turned into the mains of the gas company. The gas pipe line to Calgary was recently laid at a cost of nearly \$250,000.

HOME CONDITIONS AMONG INDIANS MUCH IMPROVED

Continued from page 1

In the matter of medical attention, the development of a new attitude has been very gratifying to the government officials. Four hospitals, with full staffs, and four travelling nurses are maintained on the reserves in Western Canada. An increasing use is being made of the hospitals while the work of the travelling nurses is also showing good results.

Each succeeding year the number of pupils attending the Indian schools shows an increase indicating the growing realization of the value of education on the reserves. A few years ago many of the Indians were opposed to sending their children to school, but most of them have come to realize that education will help them and they now appreciate the advantages provided for them in this respect. The fact that many of the parents are graduates of the reserve day schools or industrial schools also accounts for the growing interest in education.

The advancement of the Canadian Indian has been rapid during recent years and along lines that will eventually lead him to self-support and independence. To those responsible for this work, its success is gratifying and its future promising.



Motoring in the Canadian Rockies—Scene on the Banff-Windermere highway in Banff National park. Mount Niblock and Pope's Peak are seen in the background. Easy grades characterize this fine highway in the heart of the mountains.

ACCESSIBILITY OF CANADIAN ROCKIES TO THE MOTORIST

Continued from page 1

ern ends with existing provincial roads which led to the United States boundary line. It thus placed the Canadian Rockies on the great system of connected highways known as the Park-to-Park or Grand Circle Tour.

In the meantime the old wagon trail across the Crowsnest pass to the south had been brought up to motor requirements, thus affording a 600-mile loop road within Canada itself. From Pincher Creek on this highway an extension of 35 miles leads to Waterton Lakes park, the picturesque Canadian reservation which extends to the United States boundary and adjoins the United States Glacier National park.

Even before the Banff-Windermere road was completed another beauty spot had attracted the desires of the motoring public. This was lake Louise, the scenic gem of the Rockies, most beautiful of all those magically tinted lakes which have helped to render that great region famous. To meet this demand an extension of 35 miles from the main highway, forking from Castle, was constructed to Lake Louise and the coach road from Lake Louise to Moraine lake widened and standardized.

Once at Lake Louise it was inevitable that the motorist should turn his eyes westward. Yoho park adjoins Banff park along the Continental Divide. The distance from Lake Louise to the Kickinghorse pass is only a few miles. Ten miles away from the pass down the precipitous west slope lies the entrance to the far-famed Yoho valley with its Takakkaw and Twin falls and the splendid ice world at its head. Lovely Emerald lake nestles among the snow-clad peaks only a few miles farther away while beyond is the canyon

of the Kickinghorse, one of the most thrilling sections found along the main line of the Canadian Pacific railway. The idea of another loop, from Lake Louise down the west slope to Field, thence westward to Golden and south along the Columbia to the western gateway of the Banff-Windermere highway, took shape. Last autumn the first section, from Lake Louise to Field, was completed. This year work will be prosecuted on the western sections which it is hoped will be ready for travel next year, opening up what will undoubtedly be one of the greatest scenic loops on the continent.

In the meantime the project of a highway from Edmonton to Jasper, giving access to Jasper National park in the northern Rockies, has been receiving attention. During the last two years the Federal Government has put under construction the section within the park from the town of Jasper to the eastern boundary. About 35 miles of road have already been completed and it is expected that by the fall of 1926 the road will be opened to the park boundary. Motor enthusiasts are now looking forward to the day, probably not far distant, when the pioneer trails between Edmonton and the mountains will be converted into a modern highway, and the vast wilderness playground of Jasper park made accessible by motor to people from the prairies and the East.

One of the outstanding attractions of the mountain highways is that they bring the motorist, with ease and comfort, by an open-air and open-sky way, into the very heart of the greatest regions of the mountains. The road follows green alpine valleys, vocal with the music of milky-green, glacier fed streams. Giant peaks tower on every hand. The tang of the upper snows and of hundreds of miles of primeval pine forests is upon the air. At times the road climbs along the edges of thrilling canyons or across a mountain pass from which a glorious panorama opens to view. To meet the needs of the motorist in the way of accommodation, motor camps have been established at convenient points. The moderate-priced bungalow hotel is also springing up along all the main highways in the Rockies, and this great and beautiful region, capable of giving pleasure in the highest degree, is being visited each year by increasing thousands who are able at slight expense to enjoy the wonders it affords.



Improved Home Conditions Among Indians—One of the many modern homes occupied by Indians on reserves in Western Canada.

GRAPHITE MINING IN CANADA IS RECOVERING*

Industry Being Established on More Favourable Basis and Future Promising

Graphite mining in Canada is recovering from the depression from which it has suffered for some years. The industry is now being established on a more healthy and favourable basis, and promises well for the future. The Black Donald mine at Calabogie, Ontario, and the Standard mine at Guenette, Quebec, finding a ready market for their products, are producing to the full capacity of their concentrating plants. The Black Donald is marketing the greater part of its product in the United States, the Standard in Germany and in England.

In the Buckingham district of the province of Quebec, about twenty-five miles northeast of the city of Ottawa, the property of the North American Graphite Corporation was explored by diamond drilling during the autumn of 1925. Some promising ore bodies have been located which will be developed during the winter, and ore made available for milling operations in the spring. The Bell and Quebec properties in the same district have recently been acquired by Ottawa and Montreal real interests, and both of these companies appear to have obtained good financial backing.

Canadian graphite deposits are of good grade. The disseminated flake deposits contain on an average fifteen per cent graphite. The Black Donald is unique, in being the richest known deposit in America, containing over sixty per cent graphite, and owing to the superior quality of its product it was enabled to maintain production during the periods of uncertainty. Considerable tonnages of ore are available for increased production.

Canadian graphite is of high quality, suitable for both lubrication and crucible purposes. A high grade flake can readily be produced by modern methods of concentration and refining. The percentage of No. 1 flake from the disseminated ore averages around sixty per cent of the graphite content, No. 2 flake and fines making up the balance of the recovery, which is over ninety per cent of the content of the ore. The Canadian industry has suffered in the past by inefficient methods of concentration and refining, by inexperience on the part of the promoters, and by importations of cheaply mined flake from Madagascar and Ceylon. The first two factors having been largely eliminated, graphite can now be produced in Canada at a very reasonable price.

The present activity is due to higher prices for flake in the United States market and to possibilities of increased trade with Europe. Canadian operators have the stability of Canadian credit as an inducement to European trade. The greater development of this trade, and the continued support of European buyers will enable Canadian operators to furnish a dependable supply of high quality graphite.

**Prepared under the direction of Dr. Charles Camsell, Deputy Minister of Mines, Canada, by Mr. C. S. Parsons, Mines Branch, Ottawa.*

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CANADA LEADS IN MANY PHASES OF POULTRY INDUSTRY*

DOMESTIC HEN THRIVES IN
OUR CLIMATE

Canadian Birds First in Egg-Laying Contests
—World's Congress at Ottawa
in 1927

Because the hen in the wild state was a jungle fowl—a native of the hot countries—the impression prevails among those who have not looked into the question that poultry is exotic to Canada and that this country must necessarily be handicapped as compared with the countries along the Mediterranean or other warm regions. On the contrary the exact opposite is the case and Canada, because of her climatic and other advantages, leads the world in many phases of poultry production. This is in line with the general tendency shown by the more northerly developed strains of plants and animals to excel in vitality and quality their southern prototypes.

It should also be remembered that although the hen is a native of hot countries the turkey, partridge, prairie chicken, the duck and the famous Canada goose are indigenous to this country. The two latter are, of course, migratory but when domesticated thrive exceedingly well here all the year round.

Modern poultry production is concerned particularly with the domestic hen and it is to this bird that the following figures relate. The hen has followed the white man to nearly every part of Canada and has shown herself a thrifty settler. At first she took her chance with other live stock and did equally well, then came a period when men who desired to increase production confined their fowls in warm but dark and unventilated winter quarters, (with little success be it added); and finally within the last thirty years, came the discovery that given plenty of sunlight and fresh air domestic fowls thrive exceedingly well in Canada and produced a high percentage of winter eggs. The latter fact is important because the efforts of poultrymen all the world over are directed not only to egg production generally but also and especially to increasing the number produced in the winter months when eggs are most valuable.

(Continued on page 2)

*Prepared under the direction of Dr. J. H. Grisdale, deputy minister of Agriculture, by Mr. F. C. Elford, Dominion Poultry Husbandman, Ottawa, Canada.

TOURIST ATTRACTIONS OF BRITISH COLUMBIA

Grandeur of Sea and Mountain Scenery, Healthful Climate, Sport and Recreation Draw Increasing Numbers of Tourists

British Columbia, Canada's great Pacific province, comprising approximately 355,000 square miles of territory, is one of the foremost recreational coun-

tries of the Dominion, several events which have had an important bearing on the progress of Canada transpired in British



Tourist Attractions of British Columbia—Aerial view along Canada's Pacific coast showing one of the many inlets. The combination of sea and mountain scenery has made this coast world famous.

tries on the North American continent. Her geographical position, her enormous wealth of forest and fishery, marvellous and magnificent mountain ranges, majestic rivers and placid lakes, deep narrow valleys of exceeding fertility, broad sunny plateaus and admirable climate, combine to give her a unique position amongst the provinces of the Dominion. A considerable area of the province is made up of gigantic ranges, whose majestic peaks, clothed in perpetual ice and snow, present a grandeur of scenery unsurpassed by that of any other country in the world. By reason, therefore, of the many natural advantages and scenic attractions, the facilities afforded the tourist to enjoy a profitable and pleasant vacation are practically unlimited.

Columbia. Appropriate markings have been set up by the Historic Sites and Monuments Board, Department of the Interior, at various points of historic interest including: Fort Yale at Yale, where began the "Cariboo Wagon Road" in the early sixties and over which thousands of miners passed to the gold mines of Cariboo; Fort Langley at Langley Station where the Hudson's Bay Company in 1827 established the first trading post on the Pacific coast of Canada and where one of the original buildings is still standing; and Friendly Cove to commemorate the discovery of Nootka Sound by Captain James Cook in 1778. Suitable markings have been placed at Prince George, Prospect Point, Vancouver, Kamloops, Gonzales Hill near Victoria.

(Continued on page 3)

NATIONAL PARKS ARE FEATURES OF TOURIST TRAVEL

ATTRACT MANY TO BRITISH COLUMBIA

Pristine Beauty of Great Scenic Areas Preserved—Accessibility of These Parks

Among the leading features of tourist travel in British Columbia are the national parks. These regions of scenic beauty, particularly in the mountain ranges of the Central Rockies and Selkirks, were set aside by the Department of the Interior, and with the exception of such modern conveniences of travel and accommodation as were necessary to make them accessible and to afford comfort to the traveller, they are still in their pristine state. Comfortable hotels and chalets, motor camps and tea rooms, are scattered along good motor roads and drives; while trails radiate from the principal centres to great wilderness regions, only partly explored, of forest, mountain, lake and stream, and to the uplands with their alpine gardens nestling just below towering peaks, snow-capped and glacier-hung.

There are four national parks in British Columbia, two in the Rocky mountains and two in the Selkirks. Yoho park and Kootenay park lie just west of the Great Divide, and adjoin the great Banff National park in Alberta. Glacier and Revelstoke parks are farther west.

Journeying from the east, the visitor mounts to the summit of the Kicking-horse pass and at that point crosses the boundary line of British Columbia from Banff National park to Yoho park. The steep descent of the western slope was formerly made by the railway in a series of thrilling switchbacks, but the construction of the famous corkscrew tunnels rendered this line unnecessary, and the opportunity was seized to utilize this road bed to complete one of the grandest motor highways on the continent, a road which carries the tourist from Lake Louise to Field, the headquarters of Yoho park. The most important features of this park are the Yoho valley with its great Takakkaw falls over 1,500 feet high, Laughing and Twin falls, numerous other cascades, Emerald lake, the Kickinghorse river and natural bridge, and innumerable mountain peaks.

Farther south along the main range of the Rockies is Kootenay park stretch-

(Continued on page 4)

SS. "BEOTHIC" TO MAKE 1926 ARCTIC PATROL

Larger and Speedier Boat Chartered For Trip North—C.G.S. "Arctic" Retired From Service

Preparations for the 1926 patrol of Canada's Arctic archipelago are being made by the North West Territories and Yukon Branch of the Department of the Interior, and it is expected that the annual expedition will sail about July 10. This year's visit to the far northern posts will be made in the ss. *Beothic*, a sealing vessel of 2,700 tons capacity, with a speed of ten knots. This ship was chartered for the trip from Jobs Seal Fisheries Company, Limited, of St. John's, Newfoundland, to replace the C.G.S. *Arctic*, which is being retired from service. For the purpose for which she was built, which was to winter in the north in safety to herself and comfort to her crew, the *Arctic* could hardly be surpassed. She is past her prime, however, and with the gradual increase in the number of posts and the consequent heavier demands on ship accommodation a larger and speedier boat is required. The *Arctic*, certain accessories having been removed, has been turned over to the Government Salvage officer for disposal.

The *Beothic*, which has a greater speed and carrying capacity than the *Arctic*, was reconstructed last November at Newcastle-on-Tyne, England, for the seal fisheries. She was classed, for ice work A1 at Lloyd's and in her initial trip to the seal fisheries this year performed splendidly, returning with a record catch of 48,420 skins.

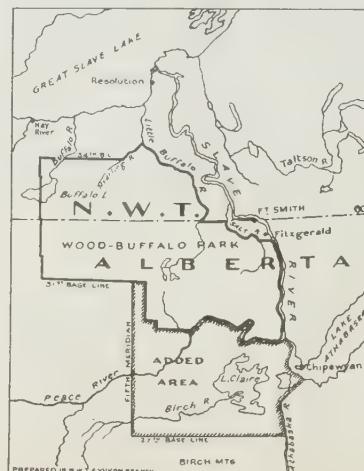
This year's expedition will sail from North Sydney, Nova Scotia, instead of Quebec. The posts already established will be visited and an effort made to complete the establishment of the new post at Bache peninsula on Ellesmere island, in latitude 79° north. Owing to ice conditions last year the materials and supplies for this proposed post had to be left at Fram Havn, about fifteen miles south of Bache peninsula. This summer the *Beothic* will pick up these supplies and attempt the passage of Rice strait and the crossing of Buchanan bay to the site of the proposed post. On the return journey, if time and conditions permit, the *Beothic* will also cruise up either Lancaster sound or Jones sound. The ship is expected to return in late September or early October.

Mr. George P. Mackenzie will again be the officer in charge. One of the conditions of the charter party is that the crew of the *Beothic* will be retained. Captain Falk, its present commander, who has had considerable experience in the navigation of Hudson and Baffin bays and adjacent waters will command the vessel. About ten members of the Royal Canadian Mounted Police will be taken north to relieve those coming out. Dr. L. J. Weeks, who accompanied last year's expedition as geologist, will also be included in this year's personnel. He, together with an assistant Mr. Maurice Haycock, will establish a base at Pangnirtung, on Cumberland sound. They will remain in the north until October, 1927, and during that time will gather geological and geographical information on the interior of Baffin island. The other members of the expedition will be announced later.

CANADA'S WOOD BUFFALO PARK

Area of Great Natural Range Increased—Further Shipment of Buffalo From Wainwright This Summer

The great area of natural buffalo range partly in the Northwest Territories and partly in Alberta, known as Wood Buffalo park, has just been increased by the addition to its southern portion of 6,500 square miles. This was done by Order in Council of April 30, 1926, and the park now extends 175 miles from north to south and 150 miles from east to west at its widest point, with a total area of 17,000 square miles.



Canada's Wood Buffalo Park—Map showing the great natural buffalo range of 17,000 square miles. The shaded lines indicate the recently added area.

This added area contains some of the best buffalo grazing lands in the north. A number of animals from the 1,634 shipped north in the summer of 1925 from Buffalo National park at Wainwright spent a portion of last winter in this locality returning north to the main herd in the spring. These animals were not molested while outside the park boundaries, but as the supervision of the wardens is more complete when within established limits it was thought advisable to extend the park to take in this eminently suitable territory.

Provision has been made in the park regulations to permit Treaty Indians, who hunted other game in that area in the past, a continuation of that privilege, and to allow those half-breeds and whites, who have in the past hunted and trapped in the recently added portion to continue as heretofore under permit from the park superintendent. The molesting of the buffalo in any way is of course not permitted.

The experiment initiated last year by the Department of the Interior to take care of the annual increase in the great herd of over 8,000 buffalo in Buffalo National park, Alberta, is being continued this year, and a further shipment will be made north this summer from Wainwright to Wood Buffalo park.

The work of segregating the animals at Wainwright park was carried on during the winter months and with the corrals used last year still in position, there will be little delay in beginning operations. It is expected the first trainload of 250 animals will leave Wainwright on June 28 on the rail journey to the end of steel at Waterways. At this point the buffalo will be unloaded into corrals and rested for from 24 to 36 hours and then placed on the barges for the trip down the Clear-

water, Athabasca, and Slave rivers to their new home. They will be unloaded by means of chutes or enclosed runways at a point about 6 miles south of Fitzgerald.

The animals shipped north last year are reported to be doing well and are well established in the new park. Only eight animals were lost in last year's movement and every precaution is being taken to have this summer's shipments carried out with the same or even better success.

Canada Leads in Many Phases of Poultry Industry

(Continued from page 1)

The Government of Canada and the provincial governments have given a great deal of attention to the poultry industry. The Dominion Government, in addition to the Central Experimental Farm at Ottawa, has 25 branch farms and a number of substations throughout Canada, and at all of these poultry work is carried on. Pedigree breeding is conducted at all the farms, egg laying contests throughout the Dominion are organized by the Poultry Division of the Experimental Farm, and there has been established the Canadian Record of Performance and Registration of Poultry, all of which develop heavy laying strains and increase production of the whole country.

With this combination of ideal climate and concentrated effort how are the poultry resources of Canada developing? The figures of actual numbers of fowls on farms and poultry plants are given below:—

Year	No. of Birds.
1901..	17,922,658
1911..	31,793,261
1924..	54,938,130

In addition to this threefold increase in numbers, the estimated egg production per hen has increased since 1901. The relative importance of poultry is shown by a comparison with the value of some other farm products. In 1924 dairy products were valued at \$218,430,532; commercial fruit, \$25,553,212; wool, \$4,199,000, and farm eggs alone \$57,950,340. As this latter does not take into consideration the value of birds sold for breeding or food, or the eggs produced in commercial or household poultry plants away from the farms, and as it does not take in the produce of the flocks of turkeys, geese and ducks, it is safe to say that in that year the value of poultry products was at least \$100,000,000.

Canada's status in the poultry world may be viewed from another angle. Fourteen countries hold egg laying contests. The rules in these contests are not all alike and Canada stands with those nations having the most stringent regulations. For instance our rules require ten hens per pen whereas some other countries permit much smaller pens or even single birds to compete, which naturally raises their average; Canada eliminates small eggs that most other countries count, and does not use artificial lights while many others do. In spite of adherence to these strict rules the results are very satisfactory to Canada. The country

HEAVY TRAFFIC ON CANADIAN CANALS

Freight Carried in 1925 Exceeded Previous Year by Over One Million Tons

Traffic through Canadian canals was heavier during 1925 by 1,261,570 tons than in 1924 according to the Dominion Bureau of Statistics. The traffic through the Canadian locks at Sault Ste. Marie was heavier than in 1924 by 3,422 tons, and the traffic on the Welland and St. Lawrence canals was the heaviest in their histories. The traffic on the Welland canal exceeded the 1924 tonnage which was the previous high record by 602,886 tons and on the St. Lawrence canals the 1924 record was exceeded by 670,614 tons. Below is shown the total freight traffic on the Canadian canals for 1925.

Name of Canal	Freight Traffic Tons
Sault Ste. Marie, Ont...	1,634,970
Welland, Ont...	5,640,298
St. Lawrence, Ont. and Que...	6,206,988
Chambly, Que...	203,720
St. Peter's, N.S...	35,691
Murray, Ont...	1,174
Ottawa River, Que...	214,940
Rideau, Ont...	85,755
Trent, Ont...	36,302
St. Andrew's, Man...	70,799
Total...	14,130,667

Of this total of 14,130,667 tons of freight 9,570,311 tons or 68 per cent was of Canadian origin, the remaining 4,560,356 tons or 32 per cent originating in the United States. Canadian vessels carried 12,618,049 tons or 89 per cent of the total and United States vessels carried 11 per cent.

with the largest number of birds entered is the United States with 12,570; the British Isles has 7,538; Canada 4,210; Australia 2,571; while the other countries range from 39 to 800 birds. The results of these contests show that Canada has an average of 172 eggs per hen per year, the British Isles 171 and the United States 164. Taking four popular breeds the averages obtained in Canada and the United States were:—

Average Eggs per Year	Canada	United States
Barred Plymouth Rock...	182	175
White Leghorn...	182	175
White Wyandotte...	169	152
Rhode Island Red...	156	149

Of the 35 birds in all the contests that laid 300 eggs and over, 19 of them were Canadian hens and we had the two highest with 332 and 331 eggs.

In 1924 Canada participated in the World's Poultry Congress held at Barcelona, Spain, and succeeded in attracting so much attention because of the completeness of her organization and the high quality of her birds that many sales to breeders in different European countries of pedigreed stock have already taken place, and, more than this, it was decided to hold the next Congress in Ottawa in the summer of 1927. This Congress it is anticipated will bring between 5,000 and 6,000 delegates (including friends, probably 10,000 people all told) to Ottawa from all parts of the world. These parties will tour the country in all directions. Thus it will be seen that the no longer lowly Canadian hen not only adds greatly to the annual production of the nation but is also making known the extent of Canada's resources to the different countries of the world.

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OTTAWA, JUNE, 1926

Tourist Attractions of British Columbia

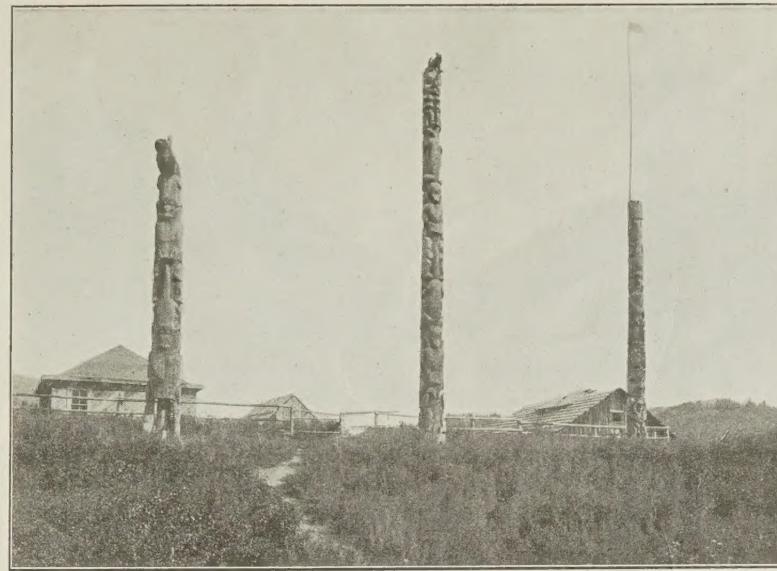
(Continued from page 1)

toria and Mackenzie's Rock near Ocean Falls commemorating important early events.

The climate of British Columbia is exceptionally healthful. Over a very large part of the province it is moderate and very temperate. The effect of the warm Japan ocean current is quite pronounced. It affects the whole Pacific coast and a large part of the interior. Naturally its greatest effect is felt along the coast where the climate is mild and very moderate. Extremes are unknown. The range between summer and winter temperatures is small. Excessive heat in summer and zero weather in winter are entirely lacking. Flowers bloom during most of the winter months while the ocean breezes are always refreshing, even in midsummer.

In the interior, climatic conditions are influenced in a great measure by the topographical features, altitude being a very important factor. The moderating influence of the warm currents of the Pacific is not so pronounced. Nevertheless it has here, as well as at the coast, a very beneficial effect. The summers are somewhat warmer and the winters colder than on the coast. The winter cold is, however, scarcely ever severe and the hottest days of summer are made pleasant from the fact that the air is dry and the nights cool. Precipitation over large areas is light; bright, dry weather being the rule.

In British Columbia there are many excellent motor roads from which the motorist may view the scenic beauty of mountain, vale, and stream. Well marked motor roads lead into the province from the Western States and the Prairie Provinces. Vancouver is the northern terminus of the famous Pacific highway, one of the longest paved roads in the world, which runs from Mexico to Canada. The new Banff-Windermere highway is one of the finest and most scenic on the continent. It completes the motor road across the Canadian Rockies, is the Canadian end of the Columbia highway from Portland, Oregon, and is part of the Grand Circle Tour which links the Canadian Rocky Mountains parks with United States national parks. The world famous Cariboo trail, built by the Royal Engineers in the early sixties of the last century, is now an excellent highway, affording motor transportation to many points within the interior of the province. The Golden-Yoho park motor road, in course of construction, will undoubtedly be one



Tourist Attractions of British Columbia—Three fine specimens of totem poles in one of the Indian villages near Hazelton, British Columbia.

of Canada's most beautiful mountain roads. On Vancouver island the Malahat drive from Victoria northward over the Malahat pass, with its views of ocean and mountain, is world famous. Various other highways afford excellent facilities for transportation to historic and wonderfully scenic districts.

Railway accommodation in British Columbia is of the very best and affords an excellent opportunity for visitors to see the many wonders of this magnificent country. Powerful and finely appointed passenger steamers ply from Vancouver and Victoria northward through the famous Inside Passage along the coast, where the mountains come down to the sea. From the International Boundary to Alaska, the coast is protected by an almost continuous fringe of islands affording rare views, while the mainland is indented by countless inlets or fjords which extend, in many cases, twenty or thirty miles inland, enabling the visitor to travel in complete safety and comfort into the heart of the coast range. Nowhere else in the world is such a combination of ocean and mountain scenery to be found except on the coast of Norway, and many experienced travellers hold that the scenery of the fjords of Norway is surpassed by that of British Columbia.

There are but few people to-day who fully realize the magnitude of the fish and game areas of this vast scenic country. The province is considerably larger than the combined area of the Pacific States—California, Oregon and Washington—and the large stretches of virgin forest, the rivers and lakes, and the mountain ranges and spacious game preserves, provide a natural breeding ground for game animals, birds, and fish. A considerable amount of the very best hunting and fishing territory within the province is accessible by steamer, rail, motor, or canoe. In the more remote sections of the north, the pack-horse is the principal means of transport.

The most important game animals of the province are grizzly bear, mountain sheep, mountain goat, moose, caribou, deer, mountain lion or cougar, and elk. There is a short open season for elk in the Fernie and Cranbrook districts, which comprise the only section in Canada where these animals may be taken. The law provides that non-residents must be accompanied by a licensed guide or a resident when on a hunting trip in this province.

British Columbia with its extensive coast line, its many large lakes, and such great rivers as the Fraser, Thompson, Kootenay, Skeena, and the upper Col-

umbia, naturally holds a leading position among the provinces of Canada in wealth of game fish. These, as distinguished from commercial fish, are principally trout and various species of salmon and are found in their respective haunts. The rainbow and cutthroat trout are probably the most gamey of the smaller varieties and are abundant in almost every stream. Visitors touring along the coastal areas are afforded an exceptional opportunity of seeing the salmon-canning industries at various centres.

British Columbia is particularly favoured with a great variety of recreational resorts at which the tourist is assured of splendid accommodation. Yoho, Mount Revelstoke, Glacier and Kootenay National parks, Mount Robson and Garibaldi provincial parks, the large and beautiful bodies of water such as Okanagan, Windermere, Kootenay, Shuswap and Arrow lakes in the south and lakes Stuart, Tacla, Babine, etc., farther north, Radium and Sinclair hot springs, the Cassiar big game country, Bowen island, and the totem pole villages of the Skeena river valley about Hazelton and at other points, are but a few of the places of real interest to tourists. Vancouver, the largest city of the province and Victoria the capital, are each noted for their splendid public buildings and beautifully kept flower gardens and beaches; and near at hand are such famous places as Stanley park, English bay, Oak bay, etc. Palatial hotel accommodation at moderate price is available at both of these prosperous and modern western cities. There are numerous attractive and up-to-date towns each having a peculiar charm, where motor camp sites and general accommodation are available. Among these are such well known scenic and attractive places as Nanaimo, New Westminster, Nelson, Cranbrook, Fernie, Grand Forks, Kelowna, Kamloops, Prince Rupert, Hazelton, Prince George, Revelstoke, Ashcroft, Rossland, Trail, Ladysmith, and Penticton.

As a winter resort, the province is rapidly gaining favour. Those who seek warmth, sunshine, outdoor life and sports, flowers blooming during the winter season, come in increasing numbers each winter from all parts of Canada and the United States. Vancouver island and the coastal regions of the southern portion of the province are particularly favoured in this connection.

As previously stated, British Columbia offers an unlimited variety of attractions. Camping, canoeing, motoring, hunting, fishing, mountain climbing, golfing, and other outdoor sports are

FISH CULTURE SERVICE DEVELOPS NEW CARRIER

Attention to Shipments of Fish Eggs During Long Voyages Now Unnecessary

The fish of Canada are so highly regarded that efforts are frequently made to establish them in foreign countries, and, to assist in such endeavours, limited numbers of eggs of several species have recently been supplied by the Fish Cultural Branch of the Department of Marine and Fisheries for experimental and observational purposes in Europe and Japan.

In 1924, salmon trout eggs from Georgian bay, lake Huron, and cutthroat trout eggs from Banff, Alberta, were supplied to the Killywhan Fisheries near Dumfries, Scotland. Since the beginning of the present year speckled trout eggs have been shipped from Vancouver to the Tokyo Angling and Country Club, Tokyo, Japan, and seago, or landlocked salmon eggs have been shipped from St. John, New Brunswick, to Dublin, Ireland. Arrangements have also been made to ship cutthroat, rainbow, and Kamloops trout eggs from British Columbia to Japan during the coming spring.

Shipments for any great distance of such a fragile and perishable nature as fish eggs were at one time accompanied by attendants, but with the system of packing and insulation now in vogue they are forwarded by express without misgiving as regards their safe delivery, provided no accident occurs. The safe delivery at their destination of the salmon trout eggs shipped to Scotland in 1924, which reached Liverpool during a dockers' strike and were consequently delayed at that port for several days, is strong testimony to the efficiency of the protection and insulation provided by the new shipping cases developed by the Department of Marine and Fisheries.

FORM EASTERN SECTION OF SEISMOLOGICAL SOCIETY

Some years ago there was formed the Seismological Society of America for the purpose of fostering research in seismology (the science of earthquake phenomena) chiefly along the Pacific coast. The data gathered have proved of such value to the branches of engineering and business most concerned that an eastern branch of the Society has now been formed to render a like service to the eastern part of the United States and Canada.

Those interested in the work of the Society may obtain information by communicating with any of the executive officers, who are:

Chairman: Dr. James B. Macelwane, Professor of Geophysics, of St. Louis University, St. Louis, Mo., U.S.A.

Vice-Chairman: Ernest A. Hodgson, Seismologist, of the Dominion Observatory, Department of the Interior Ottawa, Canada.

Secretary: Commander N. H. Heck, Chief of the Division of Terrestrial Magnetism and Seismology, of the United States Coast and Geodetic Survey, Washington, D.C., U.S.A.

but a few of the attractive features which draw yearly increasing numbers of visitors to her recreational centres.

Information covering all features of touring in British Columbia will be furnished upon application to the Department of the Interior, Ottawa.

INCREASED VALUE OF OUR LUMBER OUTPUT

Third Among Industries of Canada in 1924—Production \$141,929,559

The preliminary report of the lumber industry in Canada for 1924 just issued by the Dominion Bureau of Statistics indicates the progress of this industry and the place which it occupies in the manufacturing field of the Dominion. The comparative figures of industries place it third in the list based on value of total product. It is surpassed only by pulp and paper and flour milling, and is second in point of salaries and wages paid. The total value of all products of the industry increased from \$139,894,677 in 1923 to \$141,929,559 in 1924, an increase of 1.45 per cent.

There were increases in 1924 in the quantity production of lumber, lath, and shingles, the chief products of the industry, as well as increases in sawn ties, box shooks, and other by-products.

Although there were some decreases in the values of lumber and lath in 1924, as compared with 1923, this was more than offset by increases in shingles, sawn ties, box shooks, and other side-lines. The production of rossed pulpwood, which is included under the general classification of the lumber industry, also shows an increase in value from \$9,730,861 to \$11,583,293.

It is of interest to note that whereas Ontario and Quebec were a few years ago the greatest lumber-producing provinces British Columbia is now far ahead, manufacturing in 1924 over 41 per cent of the lumber sawn in Canada. On the basis of value of production the distribution of the lumber industry in 1924 was as follows:—

Province	Value of Product
British Columbia	\$ 53,161,257
Ontario	38,285,598
Quebec	26,489,327
New Brunswick	17,095,506
Nova Scotia	3,705,011
Manitoba	1,968,629
Saskatchewan	926,307
Alberta	171,257
Prince Edward Island	126,667
Total	\$ 141,929,559

The values of the various products were as follows:—

Product	Value
Lumber	\$ 104,444,622
Pulpwood	11,583,293
Shingles	10,406,596
Lath	5,975,253
Sawn ties	3,723,712
Box shooks	1,998,638
Veneer	841,855
Mill waste	821,339
Pickets	567,707
Match blocks	347,200
Staves	256,897
Heading	174,423
Last blocks	118,650
Spooldow	101,369

The comparatively large amount received for mill waste shows the closer utilization in saw-mills at the present time as compared with the past. This waste material, which is mostly sold for fuel, was formerly burned at the mill to get it out of the way.

The production of lumber by kinds of wood in 1924 was as follows:—

Kind	M. Ft.
Spruce	1,260,673
Douglas fir	1,000,089
White pine	614,532
Hemlock	291,665
Red pine	124,289
Cedar	115,185
Jack pine	101,077
Balsam fir	70,466
Yellow birch	64,313
Tamarack	52,068
Maple	52,017
Western yellow pine	48,738
Basswood	24,080
Elm	17,814
White birch	12,096



National Parks are Features of Tourist Travel—View of Takakkaw falls in Yoho National park, British Columbia. This famous cataract takes an initial leap of 150 feet and then gathers itself together in a glorious curtain of milky green waters and lacy streamers of spray 1,000 feet down the face of the cliff, to tumble in a final beautiful cascade of 500 feet into the Yoho river.

National Parks are Features of Tourist Travel

(Continued from page 1)

ing from north to south for over sixty miles on both sides of the famous Banff-Windermere highway, which enters from Banff park at Vermilion pass. Kootenay park contains some of the wildest and grandest scenery in the Rockies and although considered one of the "younger" of the Canadian National parks, its fame is rapidly spreading.

Poplar and cottonwood. 10,473
Beech. 7,063
Ash. 5,752
Oak. 2,783

The remainder of the production was from the following woods, chestnut, cherry, butternut, hickory, walnut, sycamore, ironwood, yellow cypress, and tulip tree, making up the total of 3,878,942 thousand feet board measure for the year.

This table shows the changes that are going on in Canada's forests. Men well remember when "white pine was King". A few years ago the growing scarcity of pine enabled spruce to push it into second place and now the progress of lumbering in British Columbia has brought Douglas fir ahead of white pine. Maple is the leading hardwood species in Ontario, with yellow birch second, but the preponderance of the latter tree in Quebec and the Maritime Provinces makes it the leading Canadian hardwood.

The report shows the immense extent of the lumber industry and the very great importance of the forests in the economic and industrial development of the Dominion, and, therefore, stresses the need of exercising all possible vigilance in forest protection.

REGULATIONS

PERMIT TIMBER BERTHS IN RAILWAY BELT IN BRITISH COLUMBIA

An amendment has been made to the Timber regulations allowing the granting at public auction of permit berths covering isolated tracts of timber where a survey is not necessary, the area not to exceed 160 acres. Applications for such berth shall be accompanied by a deposit of \$50 which is refunded if the berth is not offered for sale, or if sold to some other person than the applicant. If the applicant purchases the berth, the deposit is credited to either bonus or royalty, but if the berth is offered for sale and not sold such deposit is forfeited to the Crown. Before a berth of this class is offered for sale the tract is cruised by an official of the Department as to the quantity and quality of the timber, and if it exceeds three million feet B.M., or its equivalent, the berth is advertised for not less than 30 days, but if less than three million feet B.M. notices of the sale are posted for a short period in the post-offices in the vicinity of the tract.

The timber cut on such berths situated in the Kamloops or Revelstoke agencies is subject to the rates of dues prescribed by Section 42 of the Timber regulations, except that on sawlogs of poplar species the rate shall be \$1 per thousand feet B.M., and on other species of sawlogs \$2 per thousand feet B.M., and furthermore, the rate on split fence posts shall be at 1½ cents each. As to the rates in the New Westminster agency, they are those prescribed by Section 42 of the Timber regulations, except that on split fence posts the dues shall be 1½ cents each.

On issue of a permit, 20 per cent of the dues on the timber covered thereby must be paid in advance, and the balance paid when the timber is manufactured. At the time of sale, the purchaser must make an initial deposit not exceeding \$300 to be retained until operations are completed, and then applied to royalty or rental or refunded as the case may be. The usual quarterly returns of operations similar to those required in connection with license timber berths must be furnished to the local agent of Dominion lands, and the berth is subject to annual rental and fire-guarding charges similar to license berths, whether it is being operated or not. These berths have a tenure of one year, but if operations have been conducted in a satisfactory manner renewal permits may be granted up to five years, but for no longer.

Possibly the greatest appeal of the national park areas lies in the fact that notwithstanding the many conveniences introduced for the comfort of travellers through these immense virgin areas, none of the lure of the unknown has been lost. Primeval forests, peopled by hundreds of wild birds and animals, creep down to the towns and border the roads and trails. The beautiful lakes teem with fish, and the upland gardens are masses of wildflowers. Here, surely is the tourist land ideal, where the mental and physical man may be refreshed and invigorated.

A census of the Buffalo herds in the various national parks of Canada taken on December 31, 1925, shows that in Buffalo park, Wainwright, there were 8,373 buffalo; in Elk Island park, 446; and in Banff park, 23.

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